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Civil Engineer

**INTEGRATED NATURAL RESOURCES
MANAGEMENT**

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This instruction implements Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, and Department of Defense Instruction (DODI) 4715.3, *Environmental Conservation Program*. It explains how to manage natural resources on Air Force (AF) installations in accordance with applicable federal, state, and local laws and regulations. **Attachment 1** references applicable legal requirements and provides definitions for terms used in this instruction. Use this guidance in the United States and U.S. territories in conjunction with applicable federal, state, and local laws and regulations. For installations outside the United States and its territories, compliance requirements within the Overseas Environmental Baseline Guidance Document (OEBGD) or the Final Governing Standards (FGS) for the host country take precedence over this document. Also refer to AFI 32-7006, *Overseas Environmental Program*. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFPD 37-1, *Information Management* and Air Force Manual (AFMAN) 37-123, *Management of Records*, and disposed of in accordance with the Air Force Records Disposition Schedule (RDS) located at <https://webrims.amc.af.mil>. Users should send comments and suggested improvements on AF Form 847, *Recommendation for Change of Publication*, through channels to Headquarters, United States Air Force, Deputy Chief of Staff for Installations and Logistics, Environmental Division (HQ USAF/ILEV), 1260 Air Force Pentagon, Washington, D.C. 20330-1260. Any organization may supplement this instruction. Major Commands (MAJCOM), FOA and DRU must send one copy of each supplement to HQ USAF/ILEV; other commands send one copy of each supplement to the next higher headquarters.

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Chapter 1

HOW TO USE THIS INSTRUCTION

1.1. Background. This instruction addresses the management of natural resources on AF properties to comply with federal, state and local standards. This instruction provides Major Commands (MAJCOMs) and installations a framework for documenting and maintaining AF natural resources management programs. The primary objective of AF natural resources programs is to sustain, restore and modernize natural, statutory and workforce infrastructure to ensure operational capability. MAJCOMs may provide additional implementing guidance in their supplemental publication to this instruction. All references to MAJCOMs in this Air Force Instruction (AFI) include the Air National Guard Readiness Center and other agencies designated as “MAJCOM” equivalent by HQ USAF.

1.2. Responsibilities.

1.2.1. The Assistant Secretary of the Air Force for Installations, Environment, and Logistics (SAF/IE):

- 1.2.1.1. Oversees the AF natural resources program as the Air Force Natural Resources Trustee.
- 1.2.1.2. Serves as principal representative and advocate for integrated natural resources compliance with the Office of Secretary of Defense (OSD) staff, federal agencies, and Congress.
- 1.2.1.3. Promulgates and oversees policy for integrated natural resources management as part of an integrated environmental, safety and occupational health management system (ESOHMS).
- 1.2.1.4. Coordinates Air Force natural resource management procedures with those of the other military Services for the purpose of exploring common areas of interest and to prevent duplication of effort.
- 1.2.1.5. Disseminates and interprets Natural Resources Injury/Damage (NRI/D) policy and guidance.

1.2.2. The Civil Engineer, Headquarters United States Air Force (HQ USAF/ILE):

- 1.2.2.1. Executes policy, advocates for and allocates resources, and oversees execution of AF natural resources programs.
- 1.2.2.2. Evaluates the performance of natural resources programs throughout the AF and reports the results to SAF/IE and MAJCOMs.
- 1.2.2.3. Designates one primary voting member and up to three alternates to the Department of Defense (DoD) Conservation Committee.
- 1.2.2.4. Reviews MAJCOM conservation budget submittals for funding sufficiency.

1.2.3. Air Force Center for Environmental Excellence (AFCEE):

- 1.2.3.1. Provides technical assistance to MAJCOMs and installations on natural resources programs and training.
- 1.2.3.2. Assists installations in the preparation and review of Integrated Natural Resources Management Plans (INRMPs).

- 1.2.3.3. Provides and manages contracts, inter-agency agreements, and cooperative agreements to assist MAJCOMs and installations with implementation of natural resources management projects.
- 1.2.3.4. Manages the forestry, agricultural and grazing, and hunting, fishing and outdoor recreation program reimbursable budgets.
- 1.2.3.5. Distributes Forest Reserve Account funds for approved projects.
- 1.2.3.6. Manages the AF General Thomas D. White and the Secretary of Defense environmental awards program in accordance with AFI 36-2817, *Engineering Awards Program*.
- 1.2.3.7. AFCEE/CC Director is delegated authority to sign cooperative agreements entered into pursuant to the Sikes Act, Title 16, United States Code, Section 670c-1.
- 1.2.3.8. AFCEE/CCR-A (Eastern Region) is responsible for maintaining Coastal America program guidance for distribution and implementation.
- 1.2.4. Air Force Civil Engineering Support Agency (AFCESA):
 - 1.2.4.1. Provides technical guidance and expertise to MAJCOMs and installations on grounds maintenance, pest management, and water conservation.
 - 1.2.4.2. Administers certification records for wildland fire fighters.
- 1.2.5. Bird/Wildlife Aircraft Strike Hazard (BASH) Team: Provides guidance on minimizing wildlife hazards to aircraft operations.
- 1.2.6. Major Commands (MAJCOMs):
 - 1.2.6.1. Provide execution guidance and oversee implementation of natural resources management programs on installations within the command.
 - 1.2.6.2. Validate installation natural resources budgets, staffing, and training requirements.
 - 1.2.6.3. Review installation INRMPs to ensure compliance with applicable directives.
 - 1.2.6.4. Ensure that installations conduct required inventories of natural resources assets.
 - 1.2.6.5. Provide guidance to installations on integrating natural resources information into the installation comprehensive planning process.
 - 1.2.6.6. Sign Findings of No Practicable Alternative (FONPA) for actions within a wetland.
 - 1.2.6.7. MAJCOM/CC is delegated authority to determine the need for an Integrated Natural Resources Management Plan (INRMP) in accordance with the Sikes Act, Title 16 United States Code, Section 670a(a)(1)(B), and based on the criteria in paragraph 2.2. MAJCOMs may re-delegate this authority no further than the MAJCOM Civil Engineer.
 - 1.2.6.8. MAJCOM/CC, MAJCOM Vice Commander, and Air National Guard (ANG) Deputy Director are delegated authority to sign cooperative agreements entered into pursuant to the Sikes Act, 16 U.S.C. 670c-1, so long as the individual exercising the authority is a General Officer or a member of the Senior Executive Service.
- 1.2.7. Installation or Wing Commander:
 - 1.2.7.1. Approves the INRMP.

- 1.2.7.2. Certifies the annual review of the INRMP as valid and current; or delegates the certification of the annual INRMP review to the appropriate designee.
- 1.2.7.3. Provides appropriate funding and staffing to ensure implementation of the INRMP.
- 1.2.7.4. Controls access to and use of installation natural resources.

1.3. Environmental Management System. Consistent with Executive Order (E.O.) 13148, *Greening Government Through Leadership in Environmental Management*, April 21, 2000, Air Force installations will develop and implement an environmental management system (EMS) to sustain, restore, and modernize natural infrastructure to support mission capability. The system will be compatible with and support the Air Force Environment, Safety, and Occupational Health Management System. All AF installations and facilities will comply with the goals of E.O. 13148 and Air Force EMS interim guidance.

Chapter 2

IMPLEMENTING INTEGRATED NATURAL RESOURCES MANAGEMENT

2.1. Integrated Natural Resources Management Plan. The INRMP is the principal tool for managing military installation natural resources. Each military installation in the United States under the jurisdiction of the Secretary of Defense must prepare and implement an INRMP unless a determination is made that the absence of significant natural resources makes preparation of such a plan inappropriate (see 2.2.). INRMPs will be prepared to assist the installation commander with the conservation and rehabilitation of natural resources consistent with the use of the installation to ensure the readiness of the Armed Forces. The INRMP will define natural resources management goals and objectives that are consistent with the military mission and ensure no net loss in the capability of installation lands to support the military mission. [Attachment 2](#) provides guidelines for INRMP preparation.

2.2. Determining the Need for an INRMP. MAJCOMs must determine the need for an INRMP based on Category I and II criteria, as defined below. The MAJCOM makes the final decision on whether an INRMP is required. The United States Fish and Wildlife Service (USFWS) and the state fish and wildlife management agency should be consulted when determining if sufficient natural resources exist to warrant an INRMP.

2.2.1. Category I Criteria: Category I installations require an INRMP. Category I installations are those that have natural resources requiring protection and management, such as habitat for protected species, aquatic resources, or any habitat that is suitable for conserving and managing wildlife. An INRMP will normally be required if an installation undertakes more than one of the following activities: threatened or endangered species protection and management; fish and wildlife management; a hunting and fishing program; forest management; agriculture and grazing leases; natural resources-based outdoor recreation; or on-the-ground military operations. Installation size (acreage) should not be used as the sole determining factor in deciding the need for an INRMP.

2.2.2. Category II Criteria: Category II installations do not require an INRMP. Category II installations are deemed exempt from the INRMP requirement because of a limited natural resources land base and the absence of significant natural resources. Consult with USFWS and appropriate state natural resource management agencies when determining whether significant natural resources exist. Installations including or bordering marine environments must also consult with the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries). The Secretary of the Air Force, or delegated authority (MAJCOM), determines Category II status. The installation or wing commander must request MAJCOM approval for Category II status in writing with supporting justification.

2.3. Cooperative INRMP Preparation. Prepare INRMPs in cooperation with the USFWS and the appropriate state fish and wildlife agency for the state in which the military installation is located. Coordination with the NOAA Fisheries is also required for installations that include or border marine environments. Invite the USFWS, NOAA Fisheries (if applicable), and the state fish and wildlife agency to participate in the scoping, design, and preparation of the INRMP. [Attachment 3](#) specifies the required coordination and approval process and timeline for cooperative INRMP preparation.

2.3.1. MAJCOM Review. MAJCOMs will be provided the opportunity to review and comment on draft INRMP documents prior to release for public review.

2.3.2. **Public Review.** Provide an opportunity for the public to review a draft INRMP document and provide comments. Public notification must be made when a draft INRMP is available for comment. The USFWS, NOAA Fisheries (if applicable), and state fish and wildlife agency must be given the opportunity to review all public comments received on an INRMP.

2.3.3. **Mutual Agreement.** The INRMP will reflect the mutual agreement of the USFWS and state concerning the conservation, protection, and management of fish and wildlife resources and federally listed threatened and endangered species. Mutual agreement will be the goal with respect to the entire INRMP. However, mutual agreement is required only with respect to those elements of the INRMP that are subject to the jurisdictional authority of the USFWS or NOAA Fisheries as specified by law (e.g. Endangered Species Act), or the inherent rights of the state to conserve, protect, and manage fish and wildlife resources.

2.3.3.1. **Establishment of Mutual Agreement.** Mutual agreement, with respect to those elements of the INRMP concerning the jurisdictional authority of the USFWS, NOAA Fisheries, and state will be considered attained only upon receipt of signature or written concurrence from all of the following persons:

2.3.3.1.1. Installation or wing commander.

2.3.3.1.2. Regional Director for the USFWS (Exception: California/Nevada Operations Manager for installations in those states) or NOAA Fisheries.

2.3.3.1.3. Director of the state fish and wildlife agency.

2.3.3.2. **Failure to Reach Mutual Agreement.** In cases where the USFWS or state withholds its agreement with an INRMP based on objections to elements of the INRMP that are clearly not within the scope of the particular agency's authority, an installation may, notwithstanding the objections, finalize the INRMP as specified in [Attachment 3](#) and proceed to manage its natural resources in accordance with the terms of the plan.

2.4. INRMP Approval. The installation or wing commander approves and signs the INRMP. The Regional Director of the USFWS and the Director of the state fish and wildlife agency sign the INRMP to reflect mutual agreement on those portions of the INRMP within the scope of the agency's authority. Document on the INRMP approval page the coordination of each agency. A final copy of a completed INRMP or revision will be sent to the USFWS, state, and NOAA Fisheries when appropriate.

2.5. INRMP Implementation. An INRMP is considered to be implemented if an installation:

2.5.1. Actively requests, receives, and uses funds for Level 0 and Level 1 "must fund" projects and activities as defined by AFI 32-7001, *Environmental Quality Programming and Budgeting*;

2.5.2. Executes all "must fund" projects and activities in accordance with specific timeframes identified in the INRMP;

2.5.3. Ensures that sufficient numbers of professionally trained natural resources management personnel are available to perform the tasks required by the INRMP;

2.5.4. Reviews the INRMP annually and coordinates annually with cooperating USFWS, NOAA Fisheries (when appropriate), and relevant state offices as outlined in [2.6.](#); and

2.5.5. Documents specific INRMP accomplishments undertaken each year.

2.6. Annual INRMP Review and Coordination. Establish and maintain regular communications with the appropriate federal, state, and installation organizations to address issues concerning implementation of the INRMP. At a minimum, this shall include an annual review of the INRMP by the installation in coordination with the USFWS and state fish and wildlife agency. The annual review will be certified by the installation or wing commander, or designee. The annual review will verify that:

- 2.6.1. All “must fund” projects and activities have been budgeted for and implementation is on schedule.
- 2.6.2. All required trained natural resources positions are filled or are in the process of being filled.
- 2.6.3. Projects and activities for the upcoming year have been identified and included in the INRMP. An updated project list does not necessitate revising the INRMP if the goals and objectives remain unchanged.
- 2.6.4. All required coordinations with the USFWS and state fish and wildlife agency have occurred.
- 2.6.5. Any significant changes to the installation’s mission requirements or its natural resources have been identified.

2.7. INRMP Update. Working in cooperation with the USFWS and the appropriate state fish and wildlife agency, installations must update the INRMP at least once every five years. Interim updates at an interval of less than five years would be required in cases where changes in the military mission, new environmental compliance requirements, or other new information significantly affects the ability of the installation to implement the INRMP. If the installation mission or its natural resources management issues change significantly from those outlined in the original plan, an INRMP revision, to include coordination with the USFWS and the appropriate state fish and wildlife agency, will be required. As part of the INRMP annual review and coordination process (see 2.6.), the installation or wing commander, or designee, will make the determination if an INRMP revision is required.

2.8. Environmental Impact Analysis Process (EIAP) and INRMP Implementation. Actions proposed in an INRMP may constitute a major federal action under the National Environmental Policy Act, (42 U.S.C. 4321 *et seq.* (NEPA)). Major federal actions, as defined in Title 40, Code of Federal Regulations, Part, 1508.18 (b) (2) *Major Federal Action*, must be evaluated for potential environmental effects in accordance with Title 32, Code of Federal Regulations, Part 989, *Environmental Impact Analysis Process (EIAP)*.

2.9. Ecosystem Management. The INRMP implements ecosystem management on AF installations by setting goals for attaining a desired land condition. When preparing or revising an INRMP, consider the ecosystem management principles and guidelines in DODI 4715.3, *Environmental Conservation Program*, and the guidance provided herein.

2.9.1. Air Force Principles for Ecosystem Management.

- 2.9.1.1. Maintain or restore native ecosystem types across their natural range where practical and consistent with the military mission.
- 2.9.1.2. Maintain or restore ecological processes such as fire and other disturbance regimes where practical and consistent with the military mission.

2.9.1.3. Maintain or restore the hydrological processes in streams, floodplains, and wetlands when feasible.

2.9.1.4. Use regional approaches to implement ecosystem management on an installation by collaboration with other DoD components as well as other federal, state and local agencies, and adjoining property owners.

2.9.1.5. Provide for outdoor recreation, agricultural production, harvesting of forest products, and other practical utilization of the land and its resources, provided that such use does not inflict long-term ecosystem damage or negatively impact the AF mission.

2.9.2. Biodiversity Conservation. Biodiversity conservation is an integral part of ecosystem management. Maintain or reestablish viable populations of all native species on AF-controlled lands when practical and consistent with the military mission.

2.9.3. Exotic and Invasive Species Control. Identify the presence of exotic and invasive species, and implement programs to control and/or eradicate those species from AF installations. Develop joint control strategies with other federal, state, and local cooperating agencies and adjacent landowners to increase the effectiveness of control measures.

2.9.4. Natural Heritage Program Support. Identify through surveys and/or consultation with organizations such as The Nature Conservancy (TNC), the Association for Biodiversity Information (ABI), and state Natural Heritage Program office, those natural communities and species listed in the ABI database (<http://www.natureserve.org>) as Heritage Status Rank G1 through G3, N1 through N3, and S1 through S3. Develop and implement management strategies oriented toward the conservation of those species and communities when practical and consistent with the military mission.

2.10. Staffing. Installations will use professionally trained natural resources management personnel to develop, implement and enforce their INRMPs.

2.10.1. Outsourcing Natural Resources Management. As stipulated in the Sikes Act, 16 U.S.C. 670 *et. seq.*, the Office of Management and Budget Circular No. A-76, *Performance of Commercial Activities*, August 4, 1983 (Revised June 14, 1999) does not apply to the development, implementation and enforcement of INRMPs. When it is not practicable to utilize DoD personnel to perform natural resources management duties, priority will be given to obtaining these services from federal or state agencies having responsibilities for the conservation and management of natural resources. Document the effort to obtain federal or state services in writing before seeking non-governmental assistance.

2.10.2. Use of Non-Appropriated Fund Personnel. Non-Appropriated Fund personnel and resources may be utilized to assist in the implementation of natural resources management programs. In such cases, supervision and control of natural resources management programs will remain under the designated natural resources program manager for the installation.

2.10.3. Wildland Fire and Conservation Law Enforcement. Title 10, United States Code, Section 2465 prohibits contracts for performance of firefighting or security guard functions, with some exceptions. As such, contractors will not perform firefighting or law enforcement as a primary task unless an exception to 10 U.S.C. 2465 applies.

2.11. Integration of Natural Resources Management with Other Air Force Programs.

2.11.1. Integration with Other Environmental Programs. Coordinate draft INRMPs and revisions through the installation Environmental Protection Committee (EPC) and BASH working group. Ensure that the INRMP, Integrated Cultural Resources Management Plan, Bird/Wildlife Strike Hazard (BASH) Plan, Integrated Pest Management (IPM) Plan, and Air Installation Compatible Use Zone (AICUZ) studies are mutually supportive and not in conflict.

2.11.2. Integration with the Comprehensive Planning Process. The INRMP is a key component plan of the Base Comprehensive Plan as detailed in AFI 32-7062, *Air Force Comprehensive Planning*. The INRMP identifies natural resource features that need to be considered and incorporated into the Base Comprehensive Plan, General Plan, element plans, and other component plans and studies regarding future installation development.

2.11.3. Integration with EIAP. The installation manager for natural resources will collaborate with the EIAP manager to ensure that any activities that may affect natural resources are reviewed in accordance with 32 CFR Part 989.

2.12. Preventing Natural Resources Damage from Air Force Activities. Prior to initiation of any new construction activity, the installation proponent for natural resources will coordinate on all Certificates of Compliance for Critical Planning Actions prepared in accordance with AFI 32-1021, *Planning and Programming of Facility Construction Projects*. Environmental Restoration Program (ERP) operations conducted in accordance with AFI 32-7020, *The Environmental Restoration Program* must include plans to mitigate potential damage to natural resources from restoration activities.

2.13. Assessing Natural Resources Damage by Other Parties. In the event that natural resources under AF control are damaged by another party, such as an accidental spill of a hazardous substance, the installation incurring the damage must assess and claim damages. Refer to Title 43, Code of Federal Regulations, Part 11, *Natural Resource Damage Assessments* for guidance on claiming damages. Recovered funds must be used to restore, replace, or acquire equivalent natural resources on the installation where the damage occurred. Installations must coordinate with their MAJCOM, SAF/IE and AFLSA/JACE during the claims process.

2.14. Natural Resources Program Assessments. Internal and external assessments of natural resources programs will be conducted as a part of the Environmental Safety and Occupational Health Compliance Assessment and Management Program (ESOH CAMP), as outlined in AFI 32-7045, *Environmental Compliance Assessment and Management Program*. Assessment protocols can be found at <http://www.denix.osd.mil/cenix/DOD/Library/Assessment/tools.htm>. Attachment 1 provides a list of applicable natural resources laws and regulations.

2.15. Recognition of Outstanding Natural Resources Management. The AF General Thomas D. White and the Secretary of Defense environmental awards program recognizes outstanding individual and installation contributions to natural resources management. See AFI 36-2817, *Engineering Awards Program*, for standards and submittal procedures.

Chapter 3

WETLANDS

3.1. Protection of Wetlands. In compliance with Executive Order 11990, *Protection of Wetlands*, May 24, 1977, the AF will seek to preserve the natural values of wetlands while carrying out its mission on both AF lands and non-AF lands. To the maximum extent practicable, the AF will avoid actions which would either destroy or adversely modify wetlands. The AF will fully disclose the location of wetlands, and any land-use restrictions imposed by regulatory authority, on lands that are transferred or sold to non-federal entities.

3.2. Rivers and Harbors Act of 1899 Compliance. The Rivers and Harbors Act of 1899, Title 33, United States Code, Section 401, establishes a program to regulate activities affecting navigable waters of the United States. Section 10 of the Act (Title 33, United States Code, Section 403) directs that proponents must obtain a Section 10 permit administered by the U. S. Army Corps of Engineers (USACE) for construction, excavation, or deposition of materials in, over, or under navigable waters, or for any work which would affect the course, location, condition, or capacity of those waters. Activities requiring Section 10 permits include structures (e.g., piers, wharves, breakwaters, bulkheads, jetties, weirs, transmission lines) and work such as dredging or disposal of dredged material, or excavation, filling, or other modifications to the navigable waters of the United States. Contact the USACE prior to construction or other activities that may affect open water habitats to determine if a Section 10 permit is required.

3.3. Clean Water Act (CWA) Compliance.

3.3.1. Section 404. Section 404 of the Clean Water Act (Title 33, United States Code, Section 1344) establishes a program to regulate all dredging and filling activities related to jurisdictional waters and wetlands of the United States. Actions that may impact wetlands, to include dredging, filling, and activities that may displace soil into a wetland, may require a 404 permit from the USACE. Submit USACE ENG Form 4345, *Application for Department of the Army Permit* to the appropriate USACE District Engineer prior to any land disturbance activity located in or near a wetland area. Along with the permit application, submit a vicinity map and site development plan that includes a cross-sectional view of the affected area showing limits of jurisdictional waters, the normal water level, volume of fill material to be discharged below ordinary high water, and the area of waters affected.

3.3.2. Section 401. Section 401 of the CWA directs that any proponent of an action that requires a federal license or permit (such as a Section 404 permit) must obtain a Water Quality Certificate from the state water pollution control agency. The Water Quality Certificate certifies that the action complies with state water quality criteria. State permits to undertake projects within a specified buffer zone surrounding wetlands may also be required. When applying for a permit under state wetland protection laws, certain information not required for an USACE permit, such as a delineation of a regulated buffer area, may also be required. In some cases, permit applications may be submitted concurrently for review by both the state and the USACE.

3.4. Baseline Wetlands Inventory. Develop and maintain current inventories of wetland areas on all lands under AF control. At a minimum, the inventory will consist of a baseline survey that classifies and maps wetland areas in a manner consistent with the National Wetlands Inventory (NWI) program man-

aged by the USFWS. NWI data/maps are not adequate for project-level planning and do not constitute a boundary delineation that is adequate for obtaining a CWA section 404 permit.

3.5. Jurisdictional Wetlands Delineation. Jurisdictional wetlands are those wetlands that fulfill the three criteria (vegetation, soils, and hydrology) as described in the Wetland Delineation Manual (USACE, 1987). The AF will refer to and accept as determinative the current USACE definitions for wetlands under USACE jurisdiction. The proponent of any activity that may affect known or suspected wetlands is required to conduct a jurisdictional wetland delineation. Jurisdictional wetland delineations will be performed using methods approved by the USACE. Delineations are valid for a limited period of time, as established by the USACE District Regulatory Office, or whenever a change in definition or delineation methodology alters the demarcation. On installations with jurisdictional wetlands, the INRMP must include long-term monitoring of trends in habitat values as well as plans for wetland restoration and enhancement.

3.6. EIAP for Actions that May Affect Wetlands.

3.6.1. Finding of No Practicable Alternative (FONPA). Prior to any construction activity in a wetland area (as defined by E. O. 11990), proponents must first prepare a Finding of No Practicable Alternative, which documents that there are no practicable alternatives to such construction, and that the proposed action includes all practicable measures to minimize harm to wetlands. In preparing the FONPA, the AF must consider the full range of practicable alternatives that will meet the proposed mission requirements. SAF/IE or delegated authority signs a Finding of No Practicable Alternative. Environmental Restoration Program projects on wetland sites that are conducted under the regulatory authority of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, (Title 42, United States Code, Sections 9601-9675) do not require a FONPA.

3.6.2. EIAP Decision Documents. Proposed actions that could impact wetlands, even if the affected area is not within a jurisdictional wetland boundary, require an environmental impact analysis in accordance with NEPA and the Air Force EIAP at 32 CFR Part 989. A FONPA must be completed prior to signature on a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) document. The proposed action must include all practicable measures to minimize harm to wetlands. The EIAP must document Clean Water Act and Rivers and Harbors Act compliance, permit actions, and any mitigation actions required as a condition of a permit.

3.6.3. Coastal Zone Management Act Consistency. Proposed actions in wetlands may require a Coastal Zone Management Act consistency determination. Refer to [Chapter 5](#) for further guidance.

3.7. Wetland Mitigation Banks. A wetland mitigation bank is a wetland area that is currently being restored, enhanced, or created, and set aside to compensate for future actions that may negatively impact other wetlands within the same watershed and provide like (in-kind) wetland functions. Development of wetlands mitigation banks is encouraged when practicable as a cost-effective method to reduce the uncertainty and delays that may be associated with mitigation requirements for future installation development. A wetland bank is established by means of a formal agreement with the Army Corps of Engineers or other appropriate regulatory agency(ies) enacted prior to nomination of a wetland to the program. The value of a bank is determined through cooperation with the regulating agency to quantify the wetland values restored, enhanced, or created in terms of credits.

Chapter 4

FLOODPLAINS

4.1. Floodplain Protection. Executive Order 11988, *Floodplain Management*, May 24, 1977, requires all federal agencies to provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values of floodplains when acquiring, managing, or disposing of federal lands.

4.2. Floodplain Boundary Determination. To determine whether AF lands or a proposed action occurs in a floodplain, use the National Flood Insurance Program (NFIP) maps distributed by the Federal Emergency Management Agency (FEMA). If NFIP maps do not cover the affected area, ensure that the flood plain map contours are prepared by a professional engineer. Provide a copy of new floodplain map contours and associated survey data to the NFIP.

4.3. Assessment of Proposed Actions within a Floodplain.

4.3.1. EIAP for Actions that May Affect Floodplains. Installations must evaluate the potential effects of any proposed actions in a floodplain. For major federal actions significantly affecting the quality of the human environment, the evaluation must comply with the National Environmental Policy Act. Refer to 32 CFR Part 989 for EIAP guidance.

4.3.2. Actions that Alter Floodplain Hydrology. If an action is taken within a floodplain that permanently alters the flood hazard delineations on a NFIP map, the installation must submit an analysis reflecting those changes to FEMA. Refer to FEMA booklet MT-2, *Revisions to National Flood Insurance Program Maps* for further guidance.

Chapter 5

COASTAL AND MARINE RESOURCES

5.1. Protection of Coastal and Marine Resources. The AF will conserve and protect all coastal and marine resources whenever feasible as part of the overall natural resources management program.

5.2. Coastal Zone Management Act (CZMA) Compliance. The *Coastal Zone Management Act* (Title 16 United States Code, Sections 1451-1462) authorizes coastal states to establish a Coastal Zone Management Program (CZMP) to coordinate state, local, and federal programs of the management of coastal areas. The National Oceanic and Atmospheric Administration's Office of Ocean and Coastal Resource Management administers the program at the federal level. Once a state's program is federally approved, the CZMA allows participating states to set goals and procedures that control the use and development of designated Coastal Zones.

5.2.1. Applicability. A Coastal Zone is the area specified or delineated by a state within its federally approved Coastal Zone Management Program. All AF activities, operations, projects, and programs that affect any lands, water use or natural resources of a state's Coastal Zone must be consistent to the maximum extent practicable with the state CZMP. For AF installations within a Coastal Zone management area, the INRMP should specifically address how activities and operations will be consistent with the state CZMP.

5.2.2. Federal Consistency Determination. Installation or wing commanders must prepare a Federal Consistency Determination for consistency with the state CZMP for any activity, regardless of location, that is likely to affect any land, water, or natural resource of a Coastal Zone in the reasonably foreseeable future. After coordination with the state CZMP agency, and making appropriate changes to the proposed action, the installation will submit a Federal Consistency Determination to the appropriate state agency (e.g. Coastal Zone Coordination Council) at least 90 days before final approval of the proposed action, unless otherwise agreed upon. The state will produce a federal consistency review response indicating whether or not the state concurs with the determination. The state response will become part of the EIAP documentation for the proposed project.

5.3. Coastal Barrier Resources Act of 1982 Compliance. The *Coastal Barrier Resources Act* (Title 16 United States Code, Sections 3501-3510) regulates the expenditure of federal funds to discourage development within boundaries of undeveloped, unprotected coastal barriers (such as a bay barrier, barrier spit, or barrier island) on the Atlantic and Gulf Coasts, as identified in the Coastal Barriers Resources System maps established by the Act. Federal funds may be used for permissible activities listed in 16 U.S.C. 3505, which include national security related military actions and the management, protection and enhancement of natural resources, and maintenance of existing structures for navigation and shoreline stabilization. Consult with the USFWS when planning activities and operations that may impact lands identified in the Coastal Barriers Resources System.

5.4. Marine Mammal Protection Act of 1972 Compliance. The Marine Mammal Protection Act of 1972 (Title 16, United States Code, Sections 1361 - 1421(h)) protects marine mammals, their critical habitat, and migratory routes. Installations with marine resources must address the protection of marine mammals in the INRMP and must submit the INRMP to the National Oceanic and Atmospheric Administration, National Marine Fisheries Service for review. Any action undertaken by the AF, to

include activities that generate noise, must first assess the potential impacts on marine mammals. Installations whose activities may impact marine mammals must coordinate the proposed actions with NOAA Fisheries.

5.5. Coral Reef Protection. Executive Order 13089, *Coral Reef Protection*, June 11, 1998 directs the protection of all coral reef ecosystems, to include those species, habitats, and other natural resources associated with coral reefs within all maritime areas and zones subject to the jurisdiction or control of the United States (e.g., federal, state, territorial, or commonwealth waters). Installations will identify all coral reefs and related endemic mangrove and sea grass ecosystems in the INRMP. Installations with these protected ecosystems must address the conservation and management of these habitats in the INRMP.

5.6. Coastal America Initiative. The AF has entered into a *Memorandum of Understanding Between the Army, Navy, five other Federal Departments and the Council on Environmental Quality in the Executive Office of the President* to coordinate and cooperate in the restoration and protection of coastal areas. Under the Coastal America Initiative agreement, the Air Force Center for Environmental Excellence, Eastern Regional Environmental Office (AFCEE/CCR-A) is responsible for maintaining Coastal America program guidance for distribution and implementation. Air Force installations within coastal areas must incorporate Coastal America goals within the Installation Natural Resources Management Plan; and must annually report to the Regional Implementation Team on the status of projects to comply with the Coastal America goals. Coastal America goals must be considered in the Base Realignment and Closure (BRAC) planning process. As part of the Coastal America Initiative, the AF will support, when feasible, regional programs such as the Gulf of Mexico Program and the Chesapeake Bay Program.

Chapter 6

FISH AND WILDLIFE MANAGEMENT

6.1. Wildlife Management Programs on Air Force Lands. The INRMP will address the management of game and non-game fish and wildlife on AF installations. The INRMP will be prepared in cooperation with the USFWS, NOAA Fisheries (for installations that include or are adjacent to marine environments), and the appropriate state fish and wildlife agency. The resulting plan will reflect the mutual agreement of the installation and the cooperating agencies for the conservation, protection, and management of wildlife resources (see [2.3.](#)).

6.2. Hunting, Fishing, Trapping and Outdoor Recreation Programs.

6.2.1. Program Management. Hunting, fishing, trapping and dispersed outdoor recreation programs are appropriate when they are consistent with INRMP goals for natural resources management. Fish and game harvests must comply with all federal and state laws and regulations, and will be consistent with DoD principles for ecosystem management and biodiversity conservation. The designated installation natural resources manager is responsible for direction and oversight of hunting and fishing programs. Administrative and management costs associated with hunting, fishing, trapping and the management of outdoor recreation access must be fully reimbursed by user fees. Installations may utilize the voluntary assistance of others to help manage hunting and fishing programs, to include the Air Force Services Agency or non-AF affiliated clubs (e.g. Rod and Gun Club); but organizations outside the installation chain of command shall not direct policy on hunting, fishing, trapping and outdoor recreation. Program support provided by the Air Force Services Agency may be reimbursed from user fees.

6.2.2. Fee Collection. Hunting, fishing, trapping and outdoor recreation access fees are collected by the installation and deposited into the AF account for fish and wildlife management (57 5095). The INRMP will address the installation rules and procedures for the collection of fees for hunting, fishing, trapping and access to outdoor recreation areas by class (see [10.1.](#)). Use DoD Form 1131, *Cash Collection Voucher* to record fee collections; and submit collections to the appropriate accounting and finance office. If the Air Force Services Agency or other organization assists the natural resources management program office with the collection of user fees, any administrative fees charged must be accounted for separately from fees collected into the 57 5095 appropriation. In such case, the permit issued must identify the portion of the fee payment that represents the seller's administrative charge. Upon termination of a fee collection program for hunting, fishing, trapping, or outdoor recreation, installations must notify the MAJCOM and the collection account will be closed.

6.2.3. Access and Participation. The INRMP will address the specific rules and procedures for authorized participation and access to AF installations for hunting, fishing, trapping and outdoor recreation on unimproved lands. The INRMP will identify access areas by category and the authorized participants for each access area using the criteria established below. A commander may restrict or exclude hunting, fishing and trapping if such activity is not compatible with the military mission. When access is denied to the general public, that determination will be explained in the INRMP.

6.2.3.1. Access Categories. Installations with unimproved lands will identify in the INRMP the availability of lands, by access category, for hunting, fishing, trapping and other dispersed outdoor recreation activities. The INRMP will establish the criteria used to designate lands into each

access category, and must identify how access category designations may change with each Force Protection Condition (Normal, Alpha, Bravo, Charlie, Delta) imposed on the installation. There are three basic access categories.

6.2.3.1.1. Open Areas. Unrestricted areas on the installation where hunting, fishing, trapping and outdoor recreation are permitted to all participants.

6.2.3.1.2. Restricted Areas. Areas designated by the commander where hunting, fishing, trapping and outdoor recreation are permitted to certain categories of participants or under special arrangements as defined by the commander. The INRMP must state the rationale by which access to an area is limited to certain categories of participants.

6.2.3.1.3. Off Limits Areas. Areas designated by the commander as being off limits to recreational hunting, fishing, trapping and dispersed outdoor recreation by any person at any time. These are areas where mission security and safety concerns will not allow such use.

6.2.3.2. Participant Categories. The INRMP will establish criteria and protocols regarding user access and conduct for open and restricted access areas for the following categories of participants:

6.2.3.2.1. Active Duty Military (includes Reserve and National Guard on active duty or full time manning)

6.2.3.2.2. Department of Defense Civilians

6.2.3.2.3. Active Duty Military Dependents and Family Members

6.2.3.2.4. Military Retirees

6.2.3.2.5. Department of Defense Civilian Retirees

6.2.3.2.6. Employees of Installation Prime Contractors (defined as a contractor with a five or more year term contract).

6.2.3.2.7. General Public.

6.3. Wildlife Food Plots. Cultivation of food plots for wildlife is not an appropriate activity unless specifically addressed in the INRMP as necessary to achieve stated wildlife management goals and objectives. Food plots will not be used as a means to support game populations above the normal carrying capacity of the native habitats.

6.4. Fish and Wildlife Law Enforcement. Commanders are responsible for the enforcement of state and federal fish and game laws on AF installations. Installations with a fishing and hunting program must address the enforcement of fish and wildlife laws in the INRMP.

6.4.1. Cooperative Law Enforcement. Commanders will provide reasonable access to federal and state conservation officers for the purpose of fish and wildlife law enforcement.

6.4.2. Fish and Wildlife Law Enforcement by Air Force Personnel. The commander may designate fish and wildlife law enforcement authority to military or civilian personnel only if the person has either been certified in conservation law enforcement through training at the Federal Law Enforcement Training Center or by commission as a fish and wildlife conservation officer in the state where the installation is located. Law enforcement personnel who do not possess either federal or state fish

and wildlife enforcement certification can be used to supplement fish and wildlife law enforcement under the supervision of certified personnel.

6.5. Protection of Migratory Birds. The Department of Defense participates in the Federal Partners-in-Flight Program for the conservation of neotropical migratory birds. To the extent permitted by law, and subject to budgetary limits and mission constraints, the AF will make lands and resources accessible for furtherance of the Federal Partners-in-Flight program, and provide technical expertise for planning and implementing the program. In accordance with the Migratory Bird Treaty Act and Executive Order No. 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, January 10, 2001, avoid or minimize the negative impact of AF actions on migratory birds, and take active steps to protect birds and restore or enhance their habitat whenever possible. This includes preventing or abating pollution or detrimental alteration of the environment, as practicable, and incorporating migratory bird conservation into agency planning processes whenever possible. Notify the USFWS if unintentional take of migratory birds, reasonably attributable to AF actions, is having, or is likely to have a measurable negative effect on migratory bird populations, and implement conservation measures as specified in E.O. 13186, Section 3(e)(9).

6.6. Wildlife Damage Control.

6.6.1. Program Management. Installation pest management personnel have primary responsibility for the control of nuisance wildlife species, although the program can receive substantial support from natural resources management personnel. The installation Integrated Pest Management Plan and Bird/Wildlife Aircraft Strike Hazard Plan will designate the responsibilities for pest management and natural resources personnel for the control of nuisance wildlife. Wildlife control objectives and control techniques must be addressed in the INRMP.

6.6.2. Migratory Birds.

6.6.2.1. Incidental Takes During Military Readiness Activity. In accordance with the 2003 National Defense Authorization Act (P.L. 107-314), Migratory Bird Treaty Act requirements indicated in Title 16, United States Code, Section 703 shall not apply to the incidental taking of a migratory bird by a member of the Armed Forces during a military readiness activity. Incidental takes during military readiness activities must conform to the rules and limitations in forthcoming regulations for P.L. 107-314. Seek legal advice if uncertain whether an activity qualifies as a military readiness activity.

6.6.2.2. Intentional Takes of Migratory Birds. Any proposal to intentionally kill, wound, capture, or collect a migratory bird requires a migratory bird depredation permit issued by the USFWS in accordance with Title 50, Code of Federal Regulations, Section 21.41. Depredation of migratory birds is also subject to NEPA (42 U.S.C. 4321 *et seq.*) and EIAP (32 CFR Part 989). Once a permit is issued, installations will maintain records as mandated under the terms of the permit. Appropriate documentation in accordance with the depredation permit or the EIAP is required.

6.6.3. Nuisance Wildlife Control.

6.6.3.1. Wildlife Control in Support of Bird/Wildlife Aircraft Strike Hazard (BASH) Reduction. The INRMP and Bird/Wildlife Aircraft Strike Hazard Plan will be mutually supportive and incorporate the guidance within AFI 91-202, *USAF Mishap Prevention Program* and Air Force Pamphlet (AFPAM) 91-212, *BASH Management Techniques*. Coordinate draft INRMPs and updates

with airfield operations and flight safety personnel to ensure conformance with airfield safety criteria. Request assistance for BASH related wildlife control issues through the MAJCOM from BASH team personnel at Headquarters Air Force Safety Agency, Flight Safety Wildlife (AFSA/SEFW), 9700 Avenue G, Suite 279A, Building 24499, Kirtland AFB NM 87117-5671. See [Chapter 14](#) for additional BASH program guidance.

6.6.3.2. Other Nuisance Wildlife Control. Contact the state fish and wildlife agency prior to harassing, killing, or trapping nuisance wildlife. Wildlife control activities may require a state depredation permit. Activities that affect migratory birds may require a federal permit (see [6.6.2.2.](#)). Any action that may affect a species listed for protection under the auspices of the Endangered Species Act will require consultation with the USFWS (see [Chapter 7](#)).

6.6.4. Emergency Wildlife Control. Emergency wildlife control measures may be warranted if unanticipated wildlife problems endanger installation operations or threaten public health. MAJCOMs must authorize emergency control measures for situations that are not addressed in the INRMP, installation Integrated Pest Management Plan or BASH Plan. In such cases, notify the state fish and wildlife agency, USFWS, and the Wildlife Services Division of the Animal and Plant Health Inspection Service (APHIS) as soon as practicable.

Chapter 7

THREATENED AND ENDANGERED SPECIES MANAGEMENT

7.1. Endangered Species Act Compliance. The Endangered Species Act (ESA), (Title 16 United States Code, Sections 1531-1544), requires protection and conservation of federally listed threatened and endangered (T/E) plants and animals and their habitats. Conservation includes the use of all methods and procedures which are necessary to bring any T/E species to the point where the measures pursuant to the ESA are no longer necessary.

7.1.1. Federally Listed Species. Installations known to sustain federally listed T/E species or their habitats must address T/E species conservation in the INRMP. The INRMP goals and objectives must provide an overall ecosystem management strategy for the protection and recovery of T/E species. When practical, provide similar protection to plants and animals that are candidate species for protection by federal listing.

7.1.2. State Listed Species. INRMPs will provide for the protection and conservation of state listed protected species when practicable. Although not required by the Endangered Species Act, provide similar conservation measures for species protected by state law when such protection is not in direct conflict with the military mission. When conflicts occur, consult with the appropriate state authority to determine if any conservation measures can be feasibly implemented to mitigate impacts.

7.1.3. Host Nation Protected Species. For installations and AF operations outside the United States and its territories, responsibility for protection of host nation protected species will be as specified in the Final Governing Standards for the host country.

7.2. Inventory and Monitoring. All installations will conduct a basic reconnaissance survey for the presence of federally listed T/E species. The survey methodology, scope and species considered in the inventory will be determined after consultation with the USFWS or NOAA Fisheries, depending upon jurisdiction. Follow-up reconnaissance surveys are required if the USFWS or NOAA Fisheries determines that a new federally listed species may occur on the installation. Periodic resurveys and monitoring of known listed species are required if they are stipulated in: (1) the 'Terms and Conditions' that implement the 'Reasonable and Prudent' conservation measures rendered in a Biological Opinion from the USFWS or NOAA Fisheries, (2) a USFWS or NOAA Fisheries Species Recovery Plan, or (3) an INRMP, coordinated and approved in accordance with the Sikes Act (16 U.S.C. 670a-f). All information collected on military lands and waters that pertains to a federally listed threatened and endangered species will be shared with the USFWS and/or NOAA Fisheries. If practical, share known information on state listed species with the relevant state agency (e.g. state Department of Natural Resources or Natural Heritage Program) for inclusion in their biological and conservation database.

7.3. Interagency Consultation and Coordination.

7.3.1. Endangered Species Act Section 7 Consultation. When proposed or ongoing actions, including the preparation and implementation of an INRMP, may affect a listed species or its habitat, consultation with the USFWS or NOAA Fisheries under section 7 of the ESA must be performed (see [Attachment 4](#)). Consult with the USFWS for terrestrial species and freshwater aquatic species; and with NOAA Fisheries for saltwater fish and marine mammals. Installations must notify the MAJCOM when entering into formal consultations under the auspices of the ESA.

7.3.2. Marine Mammal Protection Act Consultation. Consult with NOAA Fisheries or the USFWS when an ongoing or proposed activity, including the preparation and implementation of an INRMP, has the potential to impact marine mammals protected under the authority of the Marine Mammal Protection Act as specified in Title 16, United States Code, Sections 1361-1421h. This is in addition to Endangered Species Act consultation requirements.

7.3.3. INRMP Coordination. All INRMPs and revisions will be sent to the USFWS, NOAA Fisheries (if applicable) and to the appropriate state fish and wildlife agency for review, comment, and coordination as specified in [Attachment 3](#). Identify by cover letter if the plan submitted for review covers the protection and conservation of a federally listed species. If a Biological Opinion has been issued as a result of ESA Section 7 consultations, the INRMP becomes the document by which the AF will describe the specific programs and activities that will be implemented to satisfy the required terms and conditions.

7.3.4. Environmental Impact Analysis Process Coordination. Title 40, Code of Federal Regulations, Chapter V, *Council on Environmental Quality*, requires all federal agencies to consider the environmental effects of proposed programs, projects, and actions prior to initiation. Pursuant to the 40 CFR Parts 1500-1508, Section 7 of the Endangered Species Act, and 32 CFR Part 989, proponents of AF actions will ensure that federally listed T/E species are fully considered. T/E species must be fully considered early in the planning process when preparing a CATEX, EA, or EIS. An Air Force CATEX may not be applied if federally listed species are potentially affected. Submit all draft EIAP documents to the USFWS and/or NOAA Fisheries for review and comment. Any required ESA Section 7 consultation must be completed prior to the issuance of any decision action under EIAP. Written documentation supporting the coordination and/or consultation with the USFWS or NOAA Fisheries must be included in the EIAP document. Copies of the final decision documents (e.g. Record of Decision, Finding of No Significant Impact) must be forwarded to the USFWS and NOAA Fisheries when federally listed species are involved.

7.4. The INRMP as a Substitute for Critical Habitat Designation. Pursuant to Title 16, United States Code, Section 1533((1)(3)(B)(i), the Secretary of Interior “shall not designate as critical habitat any lands or other geographical areas owned or controlled by the DoD, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.” Use the criteria presented below to show that the INRMP provides a benefit to the species and therefore provides adequate special management or protection.

7.4.1. The INRMP provides a conservation benefit to the species. The cumulative benefits of the management activities identified in the INRMP, for the period covered by the INRMP, must maintain or provide for an increase in a species’ population, or the enhancement or restoration of its habitat within the area covered by the INRMP (i.e., those areas deemed essential to the conservation of the species). A conservation benefit may result from reducing fragmentation of habitat, maintaining or increasing populations, insuring against catastrophic events, enhancing and restoring habitats, buffering protected areas, or testing and implementing new conservation strategies. INRMP imposed land use restrictions or other agreements to restrict land use as a condition for precluding critical habitat designation under the auspices of the Endangered Species Act must be coordinated with SAF/IE.

7.4.2. The INRMP provides assurance that the management plan will be implemented. Persons charged with INRMP implementation are capable of accomplishing the objectives of the INRMP,

have adequate funding to implement the INRMP, have the authority to implement the INRMP, and have obtained all the necessary authorizations or approvals. The INRMP must provide an implementation schedule (including projected completion dates) to achieve the goals and objectives identified in the plan.

7.4.3. The INRMP provides assurance that the conservation effort will be effective. Use the following five criteria to determine if an INRMP provides an effective conservation effort:

7.4.3.1. The INRMP includes biological goals (broad guiding principles for the program) and objectives (measurable targets for achieving the goals);

7.4.3.2. The INRMP provides quantifiable, scientifically valid parameters that will demonstrate achievement of objectives, and standards for these parameters by which progress will be measured;

7.4.3.3. The INRMP includes provisions for monitoring and, where appropriate, adaptive management;

7.4.3.4. The INRMP includes provisions for reporting progress on implementation (based on compliance with the implementation schedule) and effectiveness (based on evaluation of quantifiable parameters) of the conservation effort are provided; and

7.4.3.5. The duration of the INRMP is sufficient to implement the plan and achieve the benefits of its goals and objectives.

Chapter 8

FOREST MANAGEMENT

8.1. Forest Management Practices on Air Force Lands. The principal objective of forest management on AF installations is to maintain and enhance the ecological integrity of forested landscapes while supporting the military mission. Under the principles of ecosystem management (see 2.9.), forest treatments, to include the harvesting of forest products, may be used to achieve installation goals for forest enhancement and restoration, wildlife habitat improvement, wildfire protection, recreational development, military training requirements, airfield safety compliance, and wood production.

8.1.1. Commercial Activities. Commercial harvesting of forest products on AF lands is authorized, provided that such use is compatible with the military mission and consistent with the goals stated in the INRMP. The Range Operating Agency will determine the availability of lands for commercial activities on military training and testing ranges in accordance with guidelines in AFI 13-212, Volume 1, *Range Planning and Operations*. Commercial forestry operations must also be compatible with INRMP goals for protection of federally listed threatened and endangered species, biodiversity conservation, watershed protection, wildlife habitat enhancement, outdoor recreation, and scenic quality. Never harvest forest products for short-term profit at the expense of long-term sustainability of other ecosystem functions.

8.1.2. Timber Harvesting Methods. Use appropriate cultural practices to maintain the forest ecosystem in a healthy condition and achieve the goals stated in the installation INRMP. The INRMP must state the acceptable timber harvesting practices for the installation and explain, in terms of current and desired future condition, how the chosen management practices achieve the INRMP goals.

8.1.3. Best Management Practices. Implement Best Management Practices (BMPs) in forest management operations to minimize environmental impacts. Utilize applicable state BMPs for forest management operations.

8.1.4. Reforestation. Conduct reforestation activities as detailed in the INRMP. Favor natural regeneration methods to renew a timber stand if the technique can achieve the desired species composition and stocking rate. When considering artificial regeneration by tree planting, use only species that are native to the local area and specific ecosystem type. If site preparation is required prior to reforestation, favor techniques that minimize soil disturbance and ecological impacts. Inspect natural and artificial regeneration sites after the first, third and fifth growing season to evaluate seedling survival.

8.1.5. Forest Road Construction and Maintenance. Installations with a commercial forest resource must evaluate the existing network of forest access roads and trails in the INRMP. Forest road construction and management should be consistent with the ecosystem management objectives stated in the INRMP. Design and maintain forest access roads in accordance with applicable state Best Management Practices. Construct new single-purpose forest access roads only when absolutely necessary. Temporary roads and trails constructed solely for timber harvesting operations must be closed to vehicular traffic after the sale is completed, unless the road is identified in the Base Comprehensive Plan, INRMP, or other component plan as necessary to support the military mission or other natural resources goals.

8.1.6. Forest Inventory. Installations with commercial forest land capable of producing more than 20 cubic feet/acre/year in wood biomass must maintain a forest inventory. Update forest inventories at

least once every 10 years. Utilize a geographic information system to record and access forest inventory data.

8.1.7. Airfield Safety. Installations with active airfields must manage forest areas so that trees do not pose a hazard to air operations. Refer to Uniform Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport Planning and Design* for specifications on airfield flight surfaces and safety zones.

8.2. Forest Protection.

8.2.1. Protection from Insects and Disease. To the extent practicable, and within budget limits, support U.S. Forest Service (USFS), state, and host-nation programs for the detection, control and eradication of epidemic forest insects and disease. Refer to AFI 32-1053, *Integrated Pest Management* for guidance on the use of pesticides for forest health protection. Public Law 95-313, *Cooperative Forestry Assistance Act of 1978* and Title 16 United States Code, Section 2104 provide for United States Department of Agriculture (USDA), Forest Service assistance for forest health problems on all federal lands. Contact the appropriate Forest Service, State and Private Forestry office to obtain a biological assessment for any forest health issues on AF installations. If a biological assessment indicates that funds are needed for forest insect and disease control, submit the funding request along with a copy of the biological opinion to HQ AFCEE/TD. HQ AFCEE/TD consolidates AF funding requests and forwards them to the Armed Forces Pest Management Board for consideration and potential referral to the Forest Service.

8.2.2. Forest Fire Protection. Refer to [Chapter 12](#) for guidance on wildland fire protection.

8.3. Forest Product Sale Procedures. Do not give away, abandon or destroy forest products with marketable value. Collect payment for all forest products with economic value that are harvested on AF lands. Forest products may not be traded for goods or services nor used to offset contract costs associated with construction, land clearing, or other contracted activity. Make an attempt to offer for sale any forest products that require removal prior to initiation of construction or other land clearing operation. Prior to any land clearing or construction activity, contact at least three buyers of forest products within the region to determine if they are willing to make an offer on the forest products requiring disposal. These restrictions do not apply to materials determined to have no commercial value, as determined by the HQ AFCEE Forester or local state forestry office.

8.3.1. Small-Lot Sales. Forest products with an appraised value at \$25,000 or less may be sold by means of an installation small-lot sales contract. Conduct small-lot sales only when they serve the best interests of the government. Do not split larger timber disposal sales into small lots to avoid formal bids. Installations may use a small-lot sales contract to remove timber appraised at greater than \$25,000 when immediate tree removals are necessary to meet airfield safety requirements, as defined by a impending downgrade of airfield operability status. Informal bids must be solicited from at least three potential buyers. Document all contacts made and bids received, including contacts that respond with no bid. Upon official request from the installation, the AFCEE/TD Forester may conduct small-lot sales on behalf of the installation.

8.3.2. Large Sales. Dispose of forest products with an appraised value at greater than \$25,000 by contract sale utilizing competitive bidding procedures and the following guidelines.

8.3.2.1. Sale Preparation. For all large forest product sales, prepare contract specifications that describe in detail the forest products, sale areas, allowable harvest methods and restricted activi-

ties. Include maps or drawings of the gross sale area and net removal area. A professional Forester or trained Forest Technician must perform or supervise the layout of sale area boundaries and the marking of trees within a timber sale area. Prior to removal of forest products, the effects of the proposed action must be evaluated and documented in accordance with the EIAP process defined in 32 CFR Part 989.

8.3.2.2. **Sale Appraisal.** Obtain an appraisal of the fair market value of forest products offered for sale. Do not sell forest products for less than their appraised value without first preparing a written justification. Use regionally accepted standards for scaling, measuring, or weighing forest products. Mark appraisal documents for identified sales areas with "FOR OFFICIAL USE ONLY," and release appraisal documents only on a need-to-know basis.

8.3.2.3. **Sale Marketing.** For each forest product sale contract, prepare a solicitation for bid describing the forest products offered for sale and required harvesting specifications. Solicit bids either by means of lump-sum value or by scaled value per unit volume for each product class. Advertise forest products for sale to buyers within the region specified by the servicing contracting office.

8.3.2.4. **Sale Contract Term.** Require removal of forest products within one year or less from the date of contract award unless a longer term is deemed to be in the best interest of the government. For sales extending longer than three years, include a rate predetermination clause to reflect changes in market value.

8.3.2.5. **Sale Inspection.** Regularly inspect ongoing forest harvesting activities. The forest products buyer will be responsible for executing all the terms and conditions of the contract. The contracting office will make a determination on contract completion based upon a final inspection report indicating that all contractual obligations have been met. Document discrepancies and report them to the contracting office. Make a final inspection at the conclusion of the contract.

8.3.3. **Sale Revenue Collection.** Record revenues collected from forest product sales on a DoD Form 1131, *Cash Collection Voucher*. Deposit proceeds from forest product sales to Deposit Fund Account 57F3875.000* ADSN 333300 (* refers to the fiscal year, e.g. 57F3875.0004 for FY 2004). If sales are made on a unit weight basis, use the weight tickets from certified government or commercial scales as a basis for collection. Sale contracts may provide for scheduled payments by the buyer. Do not deposit refundable security deposits received from a buyer with forest product sale collections. Instead, hold security deposit payments in a temporary suspense account until funds are either disbursed back to the buyer or converted to revenue collections.

8.3.4. **Protection of Sensitive Natural Resources.** In contracts for commercial harvesting of forest products, specify safeguards for protection of sensitive natural and cultural resources. Include clauses that identify penalties for damages incurred. Also include clauses that identify penalties for removal or damage of forest products not designated for disposal.

8.4. Procuring Forest Management Services

8.4.1. **Federal Assistance.** The United States Forest Service (USFS) is the lead federal agency responsible for federal forest management in the United States. Under the authority of the Sikes Act, and as restricted by the Economy Act (Title 21, United States Code, Section 1535), Air Force installations may enter into Interagency Agreements that provide for the transfer of funds to the USFS for assistance in the form of personnel, agency services, or assistance with contracting actions that implement

forest management practices. Installations may also access the services of the USFS by means of an agreement between HQ AFCEE and the Forest Service for AF-wide forest management support. The U.S. Army Corps of Engineers, under authority of the Economy Act, may be used as a contracting agent for the disposal of forest products from AF lands.

8.4.2. State Assistance. Under the authority of the Sikes Act (16 U.S.C. 670a-f), installations may enter into cooperative agreements with states to execute forest management programs that implement the goals and objectives of the INRMP. Such agreements will provide a means by which the state will be reimbursed for obligations incurred in support of the forest management practices authorized by that agreement.

8.4.3. Service Contracts. Use service contracts for forest management support when in-house resources are not available. A professional Forester must review all service contracts that implement forest management practices.

8.5. Financial Management. 10 U.S.C. 2665 authorizes refunding forest management obligations with proceeds derived from the sale of forest products. DoD Financial Management Regulation Volume 11A, Chapter 16, *Accounting for Production and Sale of Forest Products*, paragraph 160203 lists the appropriate expenditures that can be reimbursed from forestry program funds. Refer to **Chapter 15** for additional guidance on financial management procedures for reimbursable conservation programs.

Chapter 9

AGRICULTURAL OUTGRANTS

9.1. Agriculture Outgrant Programs on Air Force Lands. Air Force lands may be outgranted in the form of lease, license, or permit for agricultural purposes in accordance with AFI 32-9003, *Granting Temporary Use of Air Force Real Property*, and the additional guidelines contained herein.

9.1.1. Compatibility with the Military Mission. All agricultural outgrants must be compatible with the military mission of the AF, as determined by the installation or wing commander. The Range Operating Agency will determine the availability of outgrant lands on military training and testing ranges in accordance with guidelines in AFI 13-212.

9.1.2. Compatibility with INRMP. Agricultural outgrants are authorized only when the program is used in support of goals and objectives of the installation INRMP. Agricultural outgrants for crop production, livestock grazing, equestrian operations, commercial seed harvesting, apiary placement, maple sugar collection and any other agricultural product may be conducted where feasible and compatible with the INRMP. The overriding principles of ecosystem management (see 2.9.) also apply to any outgrant of AF lands for agricultural uses.

9.2. Agricultural Outgrant Program Management.

9.2.1. Administration. The installation Real Estate Office and/or the Real Estate Division of the local U.S. Army Corps of Engineers District are responsible for administering agricultural outgrants on AF lands. Installation natural resources managers and real estate personnel will collaborate in developing agricultural outgrant documents. Outgrant renewal actions should begin at least nine months prior to expiration. The installation Real Estate Office and/or the U.S. Army Corps of Engineers will bill outgrantees in accordance with the terms of the outgrant.

9.2.2. Outgrant Instruments. Agricultural use of AF property requires a lease, license, or permit prepared, awarded, and executed in accordance with AFI 32-9003. All agricultural leases must require the outgrantee to pay cash, provide services, and/or make improvements to the extent that the government is receiving a fair market value for interest in the land. Government-owned livestock are exempt from the fee collection requirement. Licenses and permits for agricultural uses at less than fair market value are not allowed unless the licensee or permittee is eligible for an exception from the consideration requirements under AFI 32-9003.

9.2.3. Outgrant Revenue Collection. Record revenues collected from agricultural outgrants on a DoD Form 1131, *Cash Collection Voucher*. Deposit proceeds from forest product sales to Deposit Fund Account 57F3875.00AG ADSN 454545.

9.2.4. Land Use Regulations. All agriculture outgrants, to include grazing/cropland leases, licenses, and permits, require written land use regulations designed to insure the compatibility of outgrant activities with the military mission as well as to conserve the soil, water, and other natural resources within the areas included in the outgrant. Land use regulations will implement the appropriate Best Management Practices for erosion and sedimentation control as established by the USDA Natural Resources Conservation Service (NRCS) and state guidelines. Land use regulations must also be written to support the natural resources management goals and objectives in the INRMP. Develop a compliance checklist from the land use regulations that can be used to perform objective inspections of outgrant operations to monitor compliance.

9.2.5. **Technical Oversight.** Agricultural outgrant documents and their associated land use regulations must be reviewed and approved by the designated installation natural resources management specialist, the Flight Safety office, and local NRCS District Conservationist (or other cooperating agency agricultural specialist). When appropriate, enter into cooperative agreements to access technical assistance from the NRCS, USFS, Bureau of Land Management, state cooperative extension service, local soil and water conservation district, or other agency experienced in the management of agricultural and grazing lands.

9.2.6. **Compliance Inspection.** The installation natural resources management office and real estate management office jointly share responsibility for outgrant compliance inspection, except in cases where the outgrant is managed by the Army Corps of Engineers. Schedule inspections of agricultural outgrant operations in accordance with guidelines stated in AFI 32-9003. A qualified agronomist, livestock grazing specialist, or natural resources management specialist must periodically inspect outgrant sites to ensure that the outgrantee complies with the technical terms of the outgrant and associated land use regulations. Cooperating agency personnel can make periodic on-site reviews of the outgrant program to assess crop and grazing land conditions and outgrant compliance on behalf of the AF. The inspector will complete the land use regulations compliance checklist at each review. All inspection reports will be delivered to the administering real estate office for further action.

9.2.7. **Improvements and Services.** Agricultural outgrants may require the outgrantee to provide agricultural land improvements, services and other in-kind consideration in lieu of a portion or all of the cash payment due the United States Government for the grant of the interest in the land. The administering real property office will calculate the fair market value of any such improvements and services and deduct the amount calculated from the cash rent or payment due the United States Government. Outgrant instruments will provide that all such improvements become the property of the United States Government. Installations with outgrants that allow improvements, services and other in-kind consideration in lieu of a portion or all of the cash payment must provide a justification for the substitution of in-kind consideration for the cash payment in the INRMP. The INRMP justification must evaluate the impact of improvements, services, and other in-kind consideration to the economic sustainability of the program, to the military mission, and to the achievement of INRMP goals and objectives.

9.3. Guidelines for Livestock Grazing. Livestock grazing programs must adhere to the following guidelines:

9.3.1. Livestock grazing programs must be consistent with the use of the installation to support military readiness.

9.3.2. Livestock grazing programs must support the goals and objectives of the installation INRMP. Grazing will not be authorized unless such use is documented in the INRMP as essential to achieve land management goals.

9.3.3. Livestock grazing programs must not degrade the natural ecological integrity of the landscape. Do not allow grazing within native plant communities where it has been determined that such use is inappropriate for the plant community type. Suspend grazing on lands where historic overgrazing and other abusive grazing practices have limited the ability of the plant community to recover.

9.4. Guidelines for Agricultural Crop Production. Crop production programs must support the goals and objectives of the installation INRMP and Bird/Wildlife Aircraft Strike Hazard Plan. Installations with

active runways must coordinate any new cropland outgrant proposals with the installation Safety Office and Airfield Manager.

9.5. Monitoring Outgrant Lands for Compliance with the INRMP. Monitor outgranted lands to ensure that land use is in compliance with the applicable land use regulations and the land stewardship goals, objectives, and implementing guidelines stated in the INRMP. Installations with agricultural outgrants will include a description of the monitoring program in the INRMP. Monitoring programs will adhere to the guidelines listed below.

9.5.1. Monitor cropland outgrants annually to ensure that they do not create unacceptable soil losses from erosion or cause point-source or non-point pollution to any natural water body. Also monitor other direct and indirect impacts of agriculture outgrant activities on surrounding land and water resources.

9.5.2. Monitor water runoff from cropland outgrants for levels of pesticides or fertilizer that exceed state regulatory requirements. The location, method and frequency of water samples will be determined through consultation with the appropriate state agency.

9.5.3. Monitor livestock grazing outgrants using sample plots, photo points, permanent grazing enclosures, and other acceptable means to evaluate forage condition, trend, and utilization, and determine if the overall health of the rangeland resources are being sustained. Also note the presence and extent of invasive plant species (see [Chapter 13](#)).

9.6. Pest Management on Outgranted Lands.

9.6.1. Use of Pesticides by Outgrantee. Any application of pesticides on AF lands must comply with AFI 32-1053, *Pest Management Program*. Outgrantees performing pesticide application on AF lands must maintain the certification requirements of the state, territory, or host nation in which the installation lies. Outgrant instruments must require that the outgrantee obtain the approval of the installation pest management point of contact prior to any pesticide application, and report all actual pesticide usage (in pounds of active ingredient) to the pest management point of contact.

9.6.2. Control of Noxious, Exotic, and Invasive Species. Air Force agricultural outgrant programs must comply with the requirements of the Federal Noxious Weed Control Act. Outgrant programs will, to the extent practicable and within the limits of available funds, support state and federal programs for the control of noxious, exotic, and invasive plant species. Installations may enter into cooperative agreements with local area government entities that establish integrated pest management principles for the control of undesirable plant species. Expenditure of agricultural program funds to control noxious, exotic and invasive species will be consistent with the level of effort exhibited on similar federal, state or private agriculture and grazing lands in the vicinity of the installation.

9.7. Financial Management. 10 U.S.C. 2667 authorizes the use of revenues from agricultural outgrants for agriculture program operating expenses as well as to support other natural resources program initiatives AF-wide. DODI 4715.3 defines the authorized uses of agriculture program funds. Refer to [Chapter 15](#) for guidance on financial management procedures for AF reimbursable conservation programs.

Chapter 10

OUTDOOR RECREATION

10.1. Outdoor Recreation Planning. Natural resources managers must collaborate with the installation Community Planner, Range Operating Agency, Air Force Services and other offices in the planning and development of outdoor recreation areas. The Installation Natural Resources Management Plan will address outdoor recreation programs and management procedures. The INRMP will identify the areas on the installation where outdoor recreation activities and developments are appropriate, and discuss the compatibility of outdoor recreation programs with the military mission. Classify areas suitable for outdoor recreation into three classes of use based on outdoor recreation potential and ecosystem sustainability.

10.1.1. Class I areas (developed recreation areas) contain facilities designed to accommodate intensive recreational activities such as sports fields, campgrounds, picnic areas, paved walking/jogging/cycling trails, winter sports areas, marinas, developed swimming beaches, and other water sports areas.

10.1.2. Class II areas (dispersed recreation areas) are areas that are suitable to support dispersed recreational activities such as hunting, fishing, primitive camping, bird watching, boating, hiking, and sightseeing.

10.1.3. Class III areas (special interest areas) are recreation areas that contain valuable archeological, botanical, ecological, geological, historic, zoological, scenic, or other features that warrant special protection and access control. Class III areas will emphasize the protection of the unique resources. Public use, to include interpretive displays and education programs, may be permitted as specified in the INRMP.

10.2. Public Access for Outdoor Recreation. The INRMP will address the specific rules and procedures for outdoor recreation access on Class I, II, and III recreation areas that are not under the direct control of Air Force Services Agency. Allow use of outdoor recreation resources by the general public when such use is deemed by the commander to be compatible with the military mission and does not exceed the recreational carrying capacity of the land. See [6.2.3.](#) for guidelines on establishing access and participant criteria in the INRMP.

10.3. Off-Road Vehicle (ORV) Use. The INRMP will include installation policy on the use of off-road vehicles, to include mountain bikes. Allow use of off-road vehicles only after thoroughly analyzing the impact of such use on soils, archeological sites, wildlife, water quality, and other ecosystem attributes. Periodically monitor and evaluate for damage any areas designated for ORV use. Refer to Executive Order No. 11989, *Off-road Vehicles on Public Lands*, May 24, 1977.

10.3.1. Restrict use of off-road vehicles, including mountain bikes and other all terrain vehicles, to areas that can sustain their use without damage to natural or cultural resources. Require that all motorized off-road vehicles are licensed and insured.

10.3.2. Areas that are damaged from off-road vehicle use should be closed to prevent further damage. Undertake rehabilitation projects to restore the damage.

10.4. Watchable Wildlife Programs. The AF participates with other federal and state agencies and private conservation organizations in the Watchable Wildlife Program. The purpose of the program is to increase opportunities for people to observe native wildlife in their natural habitats and to support wildlife habitat preservation. When compatible with the installation mission, designate Watchable Wildlife Areas in the INRMP planning process. If access by the general public is permissible, submit information on the Watchable Wildlife site for inclusion in the state *Nature Watch* guide book. Installations with a Watchable Wildlife Program must provide an annual summary of program accomplishments to the MAJCOM.

Chapter 11

LAND MANAGEMENT

11.1. Land Management Programs. Air Force land management activities must consider the protection and enhancement of desirable natural and man-made features in the landscape. AF land management programs include landscape design, grounds maintenance, urban forest management, Bird/Wildlife Aircraft Strike Hazard reduction, irrigation and water management, pest management, invasive species management, control of non-point source pollution, and soil erosion control.

11.2. Grounds Maintenance Categories. For purposes of designating the intensity of grounds maintenance, the INRMP will delineate and map installation grounds into categories of 'improved', 'semi-improved', and 'unimproved' as defined in [Attachment 1](#). The INRMP will describe the type of ground maintenance activities that will take place within each category.

11.3. Designing and Maintaining Landscapes. Landscape design and maintenance activities must comply with the land management goals of the INRMP.

11.3.1. Landscape Design. To the maximum extent possible, utilize regionally native plants in landscape designs for improved and semi-improved grounds. Do not utilize non-native species that tend to be invasive (reproduce outside the intended growing area). Design landscapes that minimize adverse effects on natural habitats and reduce maintenance inputs in terms of energy, water, manpower, and equipment. Choose plant materials adapted to local environmental conditions that have the potential to reduce the need for irrigation, fertilization or pesticides to maintain a healthy condition. Consult the *USAF Landscape Design Guide* for technical guidance in landscape design and implementation (<http://www.afcee.brooks.af.mil/dc/dcd/land/ldg/index.html>).

11.3.2. Grounds Maintenance. Establish grounds maintenance practices according to grounds maintenance category delineations. For improved and semi-improved grounds, employ the following grounds maintenance standards:

- 11.3.2.1. Implement maintenance practices in accordance with the landscape designer's intent;
- 11.3.2.2. Eliminate unnecessary pruning of trees and shrubs;
- 11.3.2.3. Where practicable, convert improved grounds to semi-improved or unimproved grounds, and convert semi-improved grounds to unimproved grounds;
- 11.3.2.4. When feasible, convert landscapes dominated by non-native plants to native trees, shrubs, or grasses;
- 11.3.2.5. Irrigate installation grounds only when necessary to fulfill justifiable aesthetic or functional user requirements;
- 11.3.2.6. Use the HQ AFCESA Civil Engineer Service Contract Templates to formulate grounds maintenance contracts.

11.4. Golf Course Environmental Management. Golf course management activities must comply with the land management goals of the INRMP and the golf course environmental management (GEM) plan.

11.4.1. GEM Program. The goals of the GEM Program are to minimize or eliminate potential negative environmental impacts, attain and maintain compliance with all appropriate regulations, and constantly examine all aspects of golf course management to achieve the highest standards of environmental excellence.

11.4.2. GEM Planning Process. The GEM planning process includes an initial analysis, or golf course environmental baseline assessment (GCEBA), of all aspects of the golf course facility in order to provide a summary of the identified environmental issues facing the golf course manager and staff. From these issues, a GEM Plan is compiled that satisfies the specialized needs of the golf course manager with AF goals and objectives for environmental management. Consult the *U. S. Air Force Golf Course Environmental Management Program* web site for technical guidance on GEM program requirements (<http://www.afcee.brooks.af.mil/ec/golf/>).

11.5. Urban Forestry.

11.5.1. Urban Forestry Program Management. The INRMP will state long-term goals and objectives to achieve a desired future condition for installation landscape trees (i.e. urban forest). The urban forest management goals and objectives should be based upon data from an urban forest survey that identifies the current species, size, and condition of landscape trees, and any necessary tree maintenance requirements. The INRMP will include a list of recommended landscape trees and shrubs that is based upon site compatibility, life expectancy, maintenance requirements, and compatibility with BASH safety guidelines. Replacement plantings will favor native trees and shrubs or other species that are able to survive with minimal maintenance requirements. Do not plant trees or shrubs that will require irrigation for survival beyond an initial two-year establishment period. Ensure that tree plantings will not create a future hazard for aircraft and flight operations.

11.5.2. Tree City USA. Urban forestry programs at AF installations in the United States and U.S. territories must satisfy the criteria for a Tree City USA designation from the National Arbor Day Foundation. Submit Tree City USA applications to the appropriate State Forester's office in accordance with MAJCOM guidelines. Installations outside the United States and its territories may voluntarily participate by submitting Tree City applications to HQ AFCEE/TD.

11.6. Pest Management. In accordance with AFI 32-1053, *Pest Management Program*, the installation Integrated Pest Management (IPM) Plan must address all strategies for managing pests. Natural resources managers will coordinate with pest management personnel to ensure that the IPM Plan and INRMP are mutually supportive and not in conflict.

11.7. Non-point Source Pollution Prevention.

11.7.1. Use applicable Best Management Practices to minimize non-point sources of water pollution. To determine appropriate BMPs, consult the USDA Natural Resource Conservation Service, local soil and water conservation district, state agricultural extension office, or state water quality office.

11.7.2. The non-point source pollution control program and BMPs for specific projects should be consistent with the state non-point source pollution management program as well as any enforceable requirements of the state Coastal Zone Management Programs.

11.7.3. Before using treated sewage effluent in irrigation systems, coordinate with the Air Force Regional Environmental Office to determine whether federal or state water quality requirements exist.

11.8. Mineral Leasing. The Air Force Real Property Agency (AFRPA) is the contact for all mineral exploration and mining on land controlled by the AF. Refer to AFI 32-9003, *Granting Temporary Use of Air Force Real Property* for guidelines on leasing AF controlled lands for mineral exploration and mining.

Chapter 12

WILDLAND FIRE MANAGEMENT

12.1. Wildland Fire Management Policy. The Federal Wildland Fire Management Policy and Program Review of 1995 (as updated), the National Wildland Fire Coordinating Group (NWCG) *Wildland Fire Qualification Subsystem Guide* (PMS 310-1/NFES 1414), National Fire Protection Association (NFPA) Standard 295 – *Standard for Wildfire Control*, NFPA Standard 1051 – *Standard for Wildland Firefighter Professional Qualifications*, NFPA Standard 1143 – *Standard for Wildland Fire Management*, and NFPA Standard 1144 – *Standard for Protection of Life and Property from Wildfire* establish the accepted professional standards for AF wildland fire management policy. Installations with unimproved lands that present a wildfire hazard, and installations which utilize prescribed burns as a land management tool, will develop and implement a Wildland Fire Management Plan (WFMP). The WFMP will be incorporated into or consistent with the INRMP as a component plan.

12.2. Program Authority.

12.2.1. The installation or wing commander, or appropriate designee, defines the roles and responsibilities for wildland fire management on the installation and will designate an installation Wildland Fire Program Manager.

12.2.2. The installation or wing commander, or appropriate designee, approves the installation WFMP.

12.2.3. The installation Wildland Fire Program Manager is responsible for development of the WFMP. Additionally, the Wildland Fire Program Manager reviews and approves burn plans for prescribed fires consistent with the WFMP, the INRMP, and other applicable operating instructions.

12.3. Wildland Fire Organization Standards. Air Force organizations involved in wildland fire activities will incorporate NWCG standards into their organizational structure when necessary to accommodate cooperation and integration with other federal and state wildland fire organizations across jurisdictional boundaries.

12.4. Certification, Training, and Fitness Standards for Wildland Fire Management Personnel.

12.4.1. Certification Standards. All military, civilian, contractor and emergency services personnel involved in wildland fire management must possess certifications appropriate for their expected level of involvement in the wildland fire organization. All AF personnel must meet the applicable NFPA Standards for wildland fire activities.

12.4.1.1. Personnel in the GS-081 job series, 3E7X1 career paths, and contractors will meet the certification standards specified in NFPA 1051 – *Standard for Wildland Fire Fighter Professional Qualifications* and NFPA 1002 – *Standard for Fire Apparatus Driver/Operator Professional Qualifications*.

12.4.1.2. Personnel in the natural resources job series (GS-401 thru GS-499) must also meet NFPA 1051 and NFPA 1002 certification standards, but may use training criteria in the NWCG *Wildland Fire Qualification Subsystem Guide* (PMS 310-1/NFES 1414) to attain equivalent NFPA certifications. [Table 12.1](#) establishes the correlation between NFPA and NWCG certification levels, and the corresponding NWCG training requirements for attaining each certification.

12.4.1.3. Personnel mobilized to participate in wildland fire management activities on federal properties not under DoD jurisdiction, either through mutual aid agreement or other means, must be certified for the expected level of involvement under NWCG standards. GS-081 job series, DoD contractor, and 3E7X1 personnel that seek wildland fire certifications other than the NFPA Job Levels listed in [Table 12.1](#), must comply with the appropriate NWCG criteria.

12.4.1.4. Position descriptions for new hires that will participate in wildland fire activities will reflect the expected level of involvement and required certifications. Position descriptions for natural resources managers with wildland fire management duties must state if the position qualifies the position holder as a primary or secondary wildland firefighter, as described in Chapter 46 of the Office of Personnel Management *CRCS and FERS Handbook for Personnel and Payroll Offices*. Natural resources management personnel not classified as a primary or secondary wildland firefighter may perform collateral duty in wildland fire management activities as qualified.

12.4.1.5. Primary and secondary wildland firefighters in the natural resources management job series (401 thru 499) will be certified, as a minimum requirement, in Cardio-Pulmonary Resuscitation (CPR) and Standard First Aid by the American Red Cross or comparable certification authority.

12.4.1.6. HQ AFCESA/CEXF is the executive agent for the DoD Fire Fighter Certification Program (FFCP) and will be responsible for issuing, maintaining, and tracking of NFPA wildland firefighter certifications for levels identified in [Table 12.1](#).

12.4.2. Physical Fitness Standards.

12.4.2.1. The installation WFMP will describe a measurable and objective evaluation test (medical exam, step-test, pack test, etc.) that will be used to establish physical fitness standards for personnel that participate in wildland fire management activities. NWCG publications PMS 310-1/NFES 1414 – *Wildland Fire Qualification Subsystem Guide*, NFES 1596 – *Fitness and Work Capacity*, and NFES 2071 – *Fit to Work, Fatigue and the Firefighter* provide guidance for establishing physical fitness standards for wildland fire management activities.

12.4.2.2. Personnel whose job description requires participation in wildland fire management activities as a primary or secondary firefighter on AF installations will meet the pre-employment medical and physical examination criteria contained in NFPA 1582 – *Standard on Comprehensive Occupational Medical Program for Fire Departments*.

Table 12.1. Correlation of National Fire Protection Association (NFPA) and National Wildland Fire Coordinating Group (NWCG) certification levels, and the corresponding NWCG training requirements for attaining each level.

NFPA Job Title	NWCG Equivalent	NWCG Equivalent Training
Wildland Fire Fighter I	Firefighter II	S-130 Fire Fighter Training S-190 Introduction to Fire Behavior I-100 Introduction to the Incident Command System
Wildland Fire Fighter II	Firefighter I	S-131 Advanced Fire Fighter Training S-133 Look Up, Look Down, Look Around S-201 Supervisory Concepts and Techniques S-211 Portable Pumps and Water Use S-212 Wildfire Power Saws S-216 Driving for the Fire Service
Wildland Fire Officer I	Single Resource Boss, or Incident Commander Type 4	S-200 Initial Attack Incident Commander S-213 Tractor Use/Tractor Boss* S-214 Tanker Use/Tanker Boss* S-215 Fire Operations in the Urban Interface S-230 Crew Boss (Single Resource)* S-231 Engine Boss (Single Resource)* S-234 Ignition Operations S-260 Fire Business Management Principles S-270 Basic Air Operations S-290 Intermediate Wildland Fire Behavior I-200 Basic Incident Command System P-151 Wildfire origin and Cause Determination <i>*Only one of these courses is required, depending upon the type of Single Resource Boss certification desired.</i>
Wildland Fire Officer II	Incident Commander Type 3	S-300 Incident Command Extended Attack S-301 Leadership and Organizational Development S-330 Task Force/Strike Team Leader S-390 Intermediate Fire Behavior I-300 Intermediate Incident Command System

12.5. Wildland Fire Management Plan (WFMP) Components. The purpose of the installation Wildland Fire Management Plan is to reduce wildfire potential, protect and enhance valuable natural resources, and implement ecosystem management goals and objectives on AF installations. The WFMP will directly support the AF mission and be consistent with installation emergency operations plans. As a minimum, the installation WFMP will include the following components:

12.5.1. Goals and Objectives. The WFMP shall establish goals and objectives for the wildland fire management program on the installation.

12.5.2. Organizational Structure. The Wildland Fire Management Plan will describe the wildland fire management organizational structure, and will indicate its position within the installation command structure. The organizational structure for wildland fire activities will be consistent with NWCG Incident Command System standards.

12.5.3. Interagency Cooperation and Mutual Aid Agreements. Installations are encouraged to develop regional partnerships for wildland fire management support by means of reciprocal agreements with other federal, state, local and private entities to share human, logistical, and operational resources. Emergency assistance and mutual aid agreements will conform to the guidelines stated in DODI 6055.6 – *DoD Fire and Emergency Services Program*, and AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*. Include interagency agreements and mutual assistance agreements in the WFMP as references or appendices.

12.5.4. Smoke Management and Air Quality. Describe the mission, environmental, human health and safety factors specific to the installation and region that affect smoke management and identify necessary mitigation practices. Refer to NWCG publication PMS 420-2/NFES 1279 - *Prescribed Fire Smoke Management Guide* for guidance on factors to consider.

12.5.5. Safety and Emergency Operations. The Wildland Fire Management Plan must reflect that firefighter and public safety is the first priority in every wildland fire management activity. The WFMP will identify installation-specific safety and emergency operations protocols. NFPA 1977 – *Standard on Protective Clothing and Equipment for Wildland Fire Fighting* establishes the requirements for protective clothing.

12.5.6. Risk Assessment/Decision Analysis Processes. Sound operational risk management will be the foundation of the Wildland Fire Management Plan. Identify the indices and/or fire danger rating system that will be used to assess wildfire risk and potential fire behavior. The indices and/or fire danger rating system must adequately describe fire hazard, severity, intensity, and other significant factors affecting the protection of life and property. Identify the environmental factors that will be measured prior to ignition of a prescribed fire treatment. Identify normal and unique weather patterns that affect fire behavior on the installation.

12.5.7. Wildland Fire History. Include in the WFMP an analysis of both recent and long-term wildland fire history on the installation and in the region.

12.5.8. Natural and Cultural Resources Considerations Checklist. Provide a checklist in the WFMP that can be used to identify sensitive natural and cultural resources that should be given consideration before conducting any wildland fire management activity.

12.5.9. Mission Impact Considerations. Identify the potential impacts to the installation mission (positive and negative) that may occur as a result of implementation of the WFMP.

12.5.10. Wildland Fuel Factors. Identify the effects of installation fuel types and fuel loads on fire behavior. Display data on fuel types and fuel loading by maps or other means. Conduct fuel surveys to collect wildland fire fuels data if necessary.

12.5.11. Monitoring Requirements. Identify the environmental factors that will be monitored and the frequency of monitoring required for both a wildfire and prescribed fire. Identify post-fire assessment protocols for both wildfire and prescribed fires.

12.5.12. Public Relations. Identify a protocol for notifying the media and affected persons for wildfire incidents and prescribed burning activities.

12.5.13. Funding Requirements. Identify the funding requirements to train and equip wildland fire management personnel to ensure safe, effective, and cost-efficient operations in support of the Wildland Fire Management Plan. Identify the appropriate sources of funding for wildland fire activities.

12.5.13.1. Wildland fire management activities that are conducted for the purpose of compliance with environmental laws and regulations will be supported by conservation funds.

12.5.13.2. Wildfire suppression, prescribed burning and other wildland fire management activities to support training, range use, munitions testing and evaluation, or other mission activity will be supported by the responsible activity through direct funding or reimbursement.

12.5.13.3. Funding for wildfire prevention and fuels management for hazard reduction is an installation operations and maintenance responsibility.

12.5.13.4. In accordance with 10 U.S.C. 2665, expenditures for the protection and maintenance of commercial forests can be reimbursed by proceeds derived from the sale of forest products; however, the total reimbursement for forest management obligations related to wildland fire suppression cannot exceed the forest management program proceeds in a given fiscal year on the installation.

12.5.14. Personnel Training and Certification Standards and Records. The WFMP will identify the staffing requirements, according to specific certification and training requirements, for the tasks associated with wildland fire management activities on the installation. Current training and qualification records will be maintained for all personnel involved in wildland fire management activities.

12.5.15. Environmental Impact Analysis Process for WFMP Implementation. Actions proposed in an WFMP may constitute a major federal action as defined in 40 CFR Part 1508.18 (b) (2). Major federal actions must be evaluated for potential environmental effects in accordance with 32 CFR Part 989.

12.6. Prescribed Fires.

12.6.1. Use of Prescribed Fire on Air Force Installations. Prescribed fire can be used as a management tool to attain the goals and objectives of the INRMP and to support other AF mission needs. Two types of prescribed fires are recognized: 1) those ignited by qualified personnel in accordance with an approved site-specific burn plan, and 2) wildfires managed under prescribed conditions as addressed in an approved Wildland Fire Management Plan.

12.6.2. Site-Specific Burn Plans. A site-specific burn plan will be developed for each prescribed burn conducted on AF property. The installation Wildland Fire Management Plan will identify the required components for site-specific burn plans. At a minimum, burn plans will include the following:

12.6.2.1. Burn objectives

12.6.2.2. Acceptable weather and fuel moisture parameters

12.6.2.3. Required personnel and equipment resources

12.6.2.4. Burn area map

12.6.2.5. Smoke management plan

12.6.2.6. Safety considerations

12.6.2.7. Pre-burn authorization/notification checklist

12.7. Use of Fire Breaks. When planning for prescribed fires, and when suppressing wildfire, utilize natural and existing man-made features whenever possible. Fire breaks, if required, must be constructed, maintained, or rehabilitated to prevent erosion.

Chapter 13

INVASIVE SPECIES MANAGEMENT

13.1. Invasive Species Management Policy. Executive Order 13112, *Invasive Species*, February 3, 1999 requires all federal agencies to prevent the introduction of invasive species, provide for their control and minimize their economic, ecological, and human health impacts. Under Executive Order 13112, *Invasive Species*, February 3, 1999, installations will, to the extent practicable and permitted by law, not authorize, fund, or carry out management actions that are likely to cause the introduction or spread of invasive species. Address invasive species management in the INRMP. Formulate and implement INRMP goals and objectives to detect, respond rapidly to, and control populations of invasive species in a cost-effective and environmentally sound manner whenever and wherever practical. Promote native habitats and the restoration of native species in ecosystems that have been invaded. INRMP goals should also comply with the Federal Invasive Species Management Plan and other guidelines promulgated by the Federal Invasive Species Council. The invasive species management element of the INRMP will provide specific information on species to be controlled and recommended control methods.

13.2. Invasive Species Detection and Monitoring. The INRMP will include a current assessment of the presence and extent of invasive species on the installation. Conduct a survey to detect and map invasive species. Monitor invasive species populations and update inventory information as new species are discovered.

13.3. Invasive Species Control on Agricultural Outgrants. Cropland and grazing outgrants of AF properties will include requirements for the outgrantee to prevent the introduction and spread of invasive species. Outgrant agreements will include requirements to implement control measures for invasive species that are identified in the INRMP for control.

13.4. Control of Feral Animals. Installations will, to the extent practicable and permitted by law, not authorize, fund, or carry out activities that are likely to cause the introduction or spread of feral dogs, cats, pigs, goats or other non-native domesticated animals on AF-controlled lands. The INRMP will address the specific policies, programs and methods used to control feral animals on AF installations. Feeding or harboring of feral domesticated species is prohibited unless justified in the INRMP as necessary to achieve a specified natural resources management objective.

13.5. Interagency Cooperation. Installations will implement cooperative agreements, when practicable, with other federal, state and local government agencies to collaborate efforts for the control of undesirable plant species. Installations are encouraged to participate in state or regional Exotic Pest Plant Councils.

Chapter 14

BIRD/WILDLIFE AIRCRAFT STRIKE HAZARD

14.1. Bird/Wildlife Aircraft Strike Hazard (BASH) Program. The focus of the BASH program is to prevent wildlife-related aircraft mishaps and reduce the potential for wildlife hazards to aircraft operations. Accomplishing this goal requires knowledgeable natural resources management on and adjacent to installation airfields. INRMPs must support the installation's BASH Plan and the requirements of AFI 91-202, *The US Air Force Mishap Prevention Program*, AFI 91-204, *Safety Investigations and Reports*, and AFPAM 91-212, *BASH Management Techniques*. HQ AFSC/SEFW provides technical assistance to installations on BASH issues.

14.1.1. Natural resources personnel will assist the installation flight safety office and others in the development and implementation of the BASH Plan.

14.1.2. Natural Resources personnel should be active members of the installation Bird/Wildlife Hazard Working Group (BHWG), consisting of organizations involved in airfield bird control, habitat management, operations and safety.

14.1.3. Installations will establish procedures for coordination and review for installation construction and improvement projects (e.g. beautification, waste water treatment, golf courses etc.) to ensure that any BASH related impacts are considered.

14.2. Natural Resources Management Restrictions in the Airfield Environment. All aspects of installation natural resources management must be reviewed for potential wildlife hazards to aircraft operations. The land adjacent to aircraft operations areas must be managed to minimize attractions to wildlife. Surveillance of the land surrounding the airfield and coordination with adjacent landowners to reduce strike hazards are recommended.

14.2.1. Airfield Grass Height. On airfields where grass is the primary ground cover, mow airfield to maintain a uniform grass height between 7 and 14 inches. In arid climates, or in circumstances where the 7 to 14 inch grass height does not satisfy the wildlife abatement objectives, consider alternative ground cover vegetation that reduces the attractiveness of the airfield to wildlife. Waivers to the 7-14 inch grass height restriction are processed in accordance with AFI 91-202, *The US AF Mishap Prevention Program*.

14.2.2. Managing Wetlands in the Airfield Environment. Wetland areas provide the basic needs for many wildlife species and thus create potential hazards to aircraft operations. Innovative techniques to manage wildlife in wetlands should be explored and implemented. Legally defensible actions to reduce the amount of wetlands on the airfield to the maximum extent possible should be explored and pursued when their presence conflicts with the flight mission. While "no net loss" of wetlands is an important AF goal, priority must be given to flight safety.

14.2.2.1. Airfield Drainage Ditches. Manage drainage ditches to reduce their attractiveness to wildlife. According to the preamble to "Final Rule for Regulatory Programs of the Corps of Engineers," 51 *Federal Register* 41206-41217 (November 13, 1986), and reaffirmed in the preamble to "Final Notice of Issuance and Modification of Nationwide Permits," 65 *Federal Register* 12,818, 12,823-24 (March 9, 2000), non-tidal drainage and irrigation ditches excavated on dry land might not be considered as "Waters of the United States." However, coordination with appropriate regulators is necessary to determine the legal status of such areas.

14.2.2.2. Mitigation. Mitigate wetlands as far from the active airfield as possible. A wetland mitigation bank may present an opportunity to exchange marginal habitat near the runway for more pristine conditions where wildlife may thrive unencumbered by BASH initiatives.

14.2.3. Managing Agricultural Outgrants in the Airfield Environment. Agricultural and grazing outgrants (see [Chapter 9](#)) must be compatible with the installation BASH plan. Coordinate proposals for outgrants with the BHWG to insure that the crops grown and the agricultural methods used do not negatively impact flight safety.

14.2.3.1. Grain crops are highly attractive to wildlife and should never be grown near the airfield as part of an agricultural outgrant program.

14.2.3.2. Grazing animals can be a serious hazard if uncontrolled within the airfield. Ensure strict livestock control and proper fencing.

14.2.4. Land Management.

14.2.4.1. Urban Forestry. Avoid planting tree species near the airfield that attract wildlife by providing food or cover.

14.2.4.2. Non-point Source Pollution. Do not locate stormwater runoff retention ponds on the airfield.

14.2.4.3. Irrigation and Water Management. Do not use the airfield for gray water or sludge disposal.

14.2.4.4. Landscaping. Avoid using landscape plant material that attracts birds or animals for new construction projects around the airfield. Remove any landscape plants known to attract birds or wildlife in the vicinity of the airfield.

14.2.4.5. Landfills.

14.2.4.5.1. Installation Landfills. Landfills are a significant attractant to birds. Operate disposal sites according to state and federal laws. When siting new municipal solid waste disposal operations, follow Federal Aviation Administration and EPA siting criteria.

14.2.4.5.2. Off-installation Landfills. The AF cannot control land use off-installation; however, before landfills can be opened, the operator must obtain a state permit. Air Force concerns about potential bird hazards should be expertly presented at hearings held about the potential environmental impact of a planned landfill.

14.3. Management of Wildlife in Support of the BASH Plan. The INRMP must evaluate both existing and potential wildlife hazards to aircraft operations. Although the Air Force Safety Center is responsible for the overall AF BASH program, natural resources and pest management personnel are an integral part of every installation BASH program. The natural resources manager must share information on biological species and habitat diversity with the installation safety office to facilitate the development of a comprehensive BASH database.

14.3.1. Neotropical Birds. Share information on neotropical migratory birds activity with flight safety in order to enhance the installation's BASH program. An affiliation with Partners in Flight Agreement is one source for this information. Coordinate with other installations within the same flyway to obtain information on current migratory bird populations.

14.3.2. Watchable Wildlife. Consider wildlife hazards to aircraft operations when developing any Watchable Wildlife programs. Coordinate all Watchable Wildlife programs through the Bird/Wildlife Hazard Working Group and include these programs in the installation's BASH plan.

14.3.3. Airfield Wildlife Damage Control. The installation BASH plan details responsibilities for control of nuisance wildlife on the airfield. Lethal control is authorized only after all practical non-lethal control measures have been exhausted, provided that the proposed actions are reviewed in EIAP procedures as stipulated in 32 CFR Part 989. Obtain depredation permits from the USFWS pursuant to the Migratory Bird Treaty Act for intentional takes of migratory birds in support of the BASH program (also see [6.6.2.](#)). The installation BASH plan will designate the office responsible for maintaining all applicable federal and state depredation permits or Migratory Bird Treaty Act permits.

Chapter 15

NATURAL RESOURCES BUDGETING

15.1. Funding Sources. This chapter outlines the appropriate funding sources, funding priorities, and level of effort for AF conservation programs. Funding sources include the operations and maintenance (O&M) appropriation, reimbursable conservation program accounts for forestry, agriculture, fish and wildlife and outdoor recreation management, the DoD Legacy Resource Management Program, the Strategic Environmental Research and Development Program (SERDP), and other sources such as those that may be obtained through cooperative agreement under authority of the Sikes Act.

15.2. Operations and Maintenance Funds. Conservation program requirements eligible for O&M funding are programmed through the Automated Civil Engineer System - Project Management (ACES-PM). Categorize conservation requirements as recurring or non-recurring, and designate funding priority as Level 0, 1, 2, or 3. See AFI 32-7001, *Environmental Budgeting* for complete Level definitions and for additional information on programming and budgeting for environmental quality O&M requirements.

15.2.1. Level 0 Requirements. Natural resources management requirements recurring on an annual or more frequent basis that are “must do” activities. Ongoing natural resources management activities identified in an approved INRMP are Level 0 requirements if they are essential for the successful implementation of the goals and objectives stated in the plan. Level 0 also includes any INRMP actions necessary to prevent natural resource degradation that may affect military readiness. Level 0 requirements include funding for personnel, travel, training, and supply costs, as well as recurring inventories, surveys, sampling, monitoring, reporting and record keeping, payments, and fees required by a specific public law or compliance agreement (e.g. special management criteria for T/E species management).

15.2.2. Level 1 Requirements. A non-recurring requirement, occurring only one time or less frequently than once a year, that corrects an out-of-compliance condition and references a valid statutory driver in the year programmed. Valid drivers include federal laws, regulatory mandates, and state laws applicable to federal activities. The principal legal drivers for natural resources requirements are the Sikes Act, Endangered Species Act, Clean Water Act, and National Environmental Policy Act. For installations on foreign property, the principal drivers are the Overseas Environmental Baseline Guidance Document (OEBGD) and the country-specific Final Governing Standards (FGS). Level 1 projects include the initial preparation and five-year revisions of an INRMP. Projects that implement an approved INRMP, to include requirements to manage species and habitats to prevent a listing of a candidate species (under authority of the Endangered Species Act), are Level 1 requirements if they are essential for the successful implementation of the goals and objectives stated in the plan. Mitigation measures required as a prerequisite for regulatory approval of proposed projects (e.g. T/E species surveys, jurisdictional wetland delineations) must be funded as part of the proponent’s project cost and are not Level 1 environmental requirements.

15.2.3. Level 2 Requirements. A non-recurring requirement for activities and projects programmed in a fiscal year which is in advance of the year in which compliance is mandatory and necessary to prevent non-compliance beyond the program year. Legal drivers are the same as for Level 1.

15.2.4. Level 3 Requirements. Non-recurring activities and projects that are not explicitly required by an applicable legal driver, but are needed to enhance the environment beyond statutory compliance.

15.3. Reimbursable Conservation Program Funds. Funds generated from the sale of forest products, agricultural products, grazing and cropland outgrants, and the collection of fees for hunting, fishing, trapping and other outdoor recreation activities may be reimbursed to commands and installations for support of natural resources programs under certain conditions set forth by law. HQ AFCEE/TD is responsible for the administration and management of reimbursable conservation program funds.

15.3.1. Forest Management Reimbursements. 10 U.S.C. 2665 authorizes reimbursement of costs directly related to the production of forest products with proceeds derived from the sale of the forest products. Eligible forestry program reimbursements include obligations funded by O&M (appropriation 3400) or Other Procurement (appropriation 3080) that are directly related to the economic production and sale of timber, logs, pulpwood, Christmas trees, posts and poles, pine straw, stump wood, bark and other mulch, cones, seeds, mistletoe, firewood, and wood chips. Reimbursement of forest management obligations to a MAJCOM may not exceed the limit set by funding authorization documents, and may not exceed the actual proceeds generated by the MAJCOM in a fiscal year. MAJCOMs must monitor forestry proceeds and obligations within each fiscal year; and reduce the forestry program obligations submitted for reimbursement when necessary to avoid a program deficit. Additional budget guidance and procedures for the forest management program are located in AFI 65-601, Volume 1, *Budget Guidance and Procedures*. Forest management expenses authorized for reimbursement from forestry proceeds are:

15.3.1.1. Forest Improvement. Obligations incurred for the improvement of forest land, to include pre-commercial tree thinning, pruning, and the control of undesirable vegetation.

15.3.1.2. Reforestation. Obligations incurred for establishment and regeneration of forest stands, to include preparing sites, planting trees, and controlling insects, disease, and unwanted vegetation during the establishment period (3 years).

15.3.1.3. Forest Protection. Obligations incurred for the protection of forest land capable of the economic production of forest products, to include protection from fire, insects, diseases, animals, and erosion. Forest management program funds may only be used to reimburse costs of forest protection measures that are specifically conducted to protect and enhance a commercial forest resource. Obtain reimbursement from proponent activities for costs incurred in mission-related fire protection and suppression that supports military training, installation operations, range use, munitions testing and evaluation.

15.3.1.4. Forest Access Roads. Obligations incurred for construction, reconstruction, repair, and maintenance of forest access roads and trails used primarily for forest improvement operations and the harvest of forest products.

15.3.1.5. Sales of Forest Products. Obligations incurred in the preparation for sales of forest products, to include marking, surveying, mapping, appraisal, marketing, contract preparation, contract advertising, escorting prospective bidders, contract administration, and enforcing compliance with forest product sales contracts.

15.3.1.6. Administrative Expenses. Obligations incurred for administration of a commercial forest management program, to include supervising, planning, programming, conducting field surveys, inventories, training, and attending professional forestry meetings.

15.3.1.7. Forest Management Vehicles and Equipment. Obligations incurred for the procurement of vehicles and equipment used exclusively in support of forest management on AF installations. See [15.3.6.](#) for further guidance on procurement of vehicles and equipment.

15.3.2. Department of Defense Forest Reserve Account. 10 U.S.C. 2665, as amended by P.L. 98-407 and P.L. 99-561, provides for the distribution of net proceeds (gross collections less the obligations incurred) from installation forest product sales between the state government and the DoD Forest Reserve Account. States in which the revenue was generated receive forty percent of net proceeds for each installation that registers a net gain. The remaining net proceeds are deposited to the DoD Forest Reserve Account and managed by the Office of the Deputy Under Secretary of Defense (Installations and Environment), (DUSD(I&E)), according to the guidelines in DoD Financial Management Regulation 7000.14-R, Volume 11A, Chapter 16, *Accounting for Production and Sale of Forest Products*. Forest Reserve Account funds can be used to fund forestry programs as well as other conservation programs and projects that implement the goals and objectives of an approved INRMP. The Forestry Subcommittee of the Department of Defense Conservation Committee (see [1.2.2.3.](#)) reviews proposals for Forest Reserve Account funding and recommends projects for approval to DUSD(I&E). The HQ AFCEE/TD Forester serves as the AF representative on the Forestry Subcommittee of the DoD Conservation Committee. Forest Reserve account funds for approved AF projects are issued through HQ AFCEE for further distribution and program oversight.

15.3.3. Agriculture Program Reimbursements. 10 U.S.C. 2667(d)(4) authorizes the use of proceeds from agricultural outgrants and sales of agricultural products to cover the administrative expenses of agricultural leasing, and to finance natural resources management activities that implement an approved INRMP. These obligations may include costs of normal operations (appropriation 3400) or investment equipment (appropriation 3080). Authorized uses of cropland and grazing funds include:

15.3.3.1. Civilian Pay - limited to persons providing direct support of agriculture programs and natural resources management programs on AF installations.

15.3.3.2. Administrative Expenses – travel, training, attendance at professional and scientific meetings, administrative oversight, and supplies that are directly related to the management of natural resources on AF installations.

15.3.3.3. Land Improvements – limited to improvements that increase the productivity or value of to land for outgrant purposes.

15.3.3.4. Vehicles and Equipment – vehicles and equipment purchased with agricultural funds may only be used in support of agriculture outgrant management and in support of implementation of the INRMP. See [15.3.6.](#) for further guidance on procurement of vehicles and equipment.

15.3.4. Fish and Wildlife Management Reimbursements. The Sikes Act, 16 U.S.C. 670a(b) (3)(B), allows hunting, fishing, trapping and other outdoor recreation fees to be reimbursed back to the installation where they were generated. Fish and wildlife management fees are collected into the 57R5095 accounting classification and, upon approval, are disbursed back to the installation in the 57X5095 appropriation. These fees must be used only on the installation where they were collected, and used only for the protection, conservation, and management of fish and wildlife, to include habitat improvement and related activities. Authorized uses of 57X5095 appropriation funds include civilian pay, vehicle and equipment procurement, and other administrative expense directly related to the management of the fish and wildlife program on the installation. Vehicles and equipment procured with 57X5095 funds may only be used to support fish and wildlife management activities that imple-

ment the INRMP. See [15.3.6](#) for further guidance on procurement of vehicles and equipment. Installations must notify their MAJCOM if they terminate hunting, fishing, or trapping programs; so that the 57X5095 account can be closed.

15.3.5. Reimbursable Conservation Program Budget Process. HQ AFCEE/TD will maintain the database used by MAJCOMs and installations to prepare, authorize, and track reimbursable conservation program budgets. Reimbursable conservation program budgets must adhere to the following timeline:

15.3.5.1. Installations use the reimbursable conservation budget database to prepare annual submissions for reimbursable conservation program funding by 31 March each year for the upcoming fiscal year.

15.3.5.2. MAJCOMs review, edit and approve installation budget requests by 30 June prior to the upcoming fiscal year. MAJCOMs must insure that projected incomes are reasonable and in line with program obligations.

15.3.5.3. HQ AFCEE/TD reviews and consolidates budgets and recommends a final budget to HQ USAF/ILEV by 31 August.

15.3.5.4. HQ USAF/ILEV reviews and approves the final budget by 30 September.

15.3.5.5. HQ AFCEE/TD transmits the approved budget to SAF/FMB with an information copy to the MAJCOMs.

15.3.5.6. SAF/FMBO issues an operating budget authority (OBA) document as instructed by HQ AFCEE/TD in accordance with the approved final budget. The OBA document imposes ceiling limitations on the maximum amount of obligations that can be reimbursed to MAJCOMs from program proceeds.

15.3.5.7. HQ AFCEE oversees the distribution of reimbursable conservation funds in accordance with the OBA document, and limited by the availability of program proceeds.

15.3.5.8. MAJCOMs distribute applicable portions of reimbursable conservation program funds to their installations, and will monitor expenditures to insure that total MAJCOM obligations for a fiscal year do not exceed program proceeds.

15.3.6. Procurement of Vehicles and Equipment with Reimbursable Conservation Program Funds. Authorized obligations under appropriation 3080 for the procurement of reimbursable conservation program vehicles and other equipment may be reimbursed with funds generated from the sale of forest products, agricultural products, and income from livestock grazing and cropland outgrants. Fish and wildlife program vehicles are procured under appropriation 5095 with funds generated from the collection of hunting, fishing, trapping and other outdoor recreation fees. Use the following procedures to procure reimbursable conservation program vehicles and equipment:

15.3.6.1. Installations identify reimbursable conservation program vehicle and equipment requirements in the annual budget submittal by 31 March each year for the upcoming fiscal year. Requests for reimbursable conservation program vehicles and equipment are denoted in the budget submittal under appropriation 3080 for forestry and agricultural vehicles, and appropriation 5095 for fish and wildlife program vehicles. Include with the budget submittal a report of any excess equipment in good condition that is available for trade-in or lateral distribution.

15.3.6.2. AFCEE/TD reviews vehicle and equipment requirements for technical sufficiency, determines whether excess equipment from another installation may be available to meet the need,

and submits vehicle and equipment procurement requests in the consolidated program budget to HQ USAF/ILEV by 31 August.

15.3.6.3. HQ USAF/ILEV issues an approved budget to SAF/FMBI, which issues 3080 or 5095 appropriation funding authority to the MAJCOM.

15.3.6.4. Upon receipt of approved funding for new or replacement equipment from the MAJCOM, the installation Custodian Account/Custodian Receipt Listing (CA/CRL) custodian submits a Table of Allowance Change Request (TACR) to the Supply (LGS) office using the automated AF Form 601 in the Air Force Equipment Management System (AFEMS). All AF Forms 601 for Integrated Natural Resources Program vehicles/equipment will contain the statement "This requirement is approved IAW the provisions of AFI 32-7064 and AFMAN 23-110, Vol. II, Part Two, Chap 22, Section K, paragraph 22.191."

15.3.6.5. The installation Supply office validates the vehicle authorization and coordinates the approval with the Transportation (LGT) office.

15.3.6.6. Upon approval and certification from the Supply and Transportation offices, the CA/CRL custodian requests an equipment procurement by the appropriate contracting office. The request will identify the specifications and value of any vehicle that is available for trade-in to the vendor.

15.3.6.7. The installation Chief of Transportation assigns a local registration number to new vehicles to track operations and maintenance costs. Vehicles and equipment purchased using the 5095 appropriation, and vehicles purchased with 3080 appropriation funds that were reimbursed from agricultural or forestry proceeds, are reimbursable program assets and may not be used for other purposes.

15.3.7. Reimbursable Conservation Program Vehicle and Equipment Management and Maintenance Procedures. The installation natural resources program manager accounts for, inventories, and documents all equipment purchase and maintenance costs for vehicles purchased with Reimbursable Conservation Program funds using the following procedures:

15.3.7.1. Account for Reimbursable Conservation Program vehicles and equipment on a CA/CRL, similar to other tools and equipment, using Allowance Source Code "041." Vehicles and equipment purchased with Reimbursable Conservation Program funds are not accounted for on the Civil Engineer Vehicle Master Listing.

15.3.7.2. Maintain a vehicle maintenance log of maintenance operations and costs.

15.3.7.3. Take inventory of vehicles and equipment during the first month of each fiscal year.

15.3.7.4. Notify HQ AFCEE of any excess vehicles and equipment available for redistribution. Excess vehicles and equipment that were purchased with reimbursable conservation program funds will be redistributed to other installations at the direction of the HQ AFCEE program manager.

15.3.7.5. Turn in irreparable excess equipment to the nearest Defense Marketing and Reutilization Office.

15.4. Legacy Resources Management Program. DoD Legacy Resources Management Program funds are managed by the DUSD(I&E). Submit pre-proposals and proposals for Legacy funds via the Legacy

website at <http://www.dodlegacy.org>, which provides full instructions, schedules, criteria, and other guidance.

15.5. Strategic Environmental Research and Development Program. SERDP is a joint program of the Departments of Defense and Energy, and the U.S. Environmental Protection Agency. The DoD SERDP program can be used to fund conservation research on DoD installations. SERDP can pay for certain research and development projects that involve the development of new technologies for natural and cultural resources management. Details for submitting conservation proposals to the SERDP can be found at <http://www.serdp.org/funding/funding.html>.

Chapter 16

PUBLIC RELATIONS FOR NATURAL RESOURCES PROGRAMS

16.1. Overview.

The public has a vested interest in installation natural resources management. As taxpayers, they provide the funding of the various programs and, in some cases, they are users of the resources. Members of the public often serve as volunteers to support natural resources programs where they have a personal interest, and they review environmental documents and management plans affecting these programs when appropriate.

16.2. Public Relations Program. The installation natural resources manager works with the installation public affairs office to establish an ongoing natural resources public relations program.

16.2.1. Heighten public awareness through existing programs such as Coastal America, Watchable Wildlife and Tree City USA.

16.2.2. Use programs, events, and news releases to publicize installation efforts in integrated natural resources management.

16.2.3. Sponsor public events associated with commemorative days such as National Hunting and Fishing Day, Earth Day, and National Arbor Day.

16.2.4. Develop environmental education programs in cooperation with local educational institutions, conservation organizations, and public service agencies.

16.2.5. Regularly issue news releases announcing upcoming events and accomplishments in installation natural resources management.

16.3. Public Access to Air Force Land and Water Areas.

16.3.1. Access for Outdoor Recreation. The installation or wing commander, in consultation with Security Forces, Safety Office, and Judge Advocate, determines the extent of access on all areas designated in the INRMP as suitable for outdoor recreation. Allow use of outdoor recreation resources by the general public when such use is deemed by the commander to be compatible with the military mission. Access determinations should address the permissible types of activities, season of access, mission sensitivities, and permissible category of user (see [6.2.3.](#)).

16.3.2. Access to Support Natural Resources Program Goals. Access may be granted to federal and state officials who furnish professional advice and technical assistance, and individuals who conduct academic research on natural resources. Researchers may collect plants, animals, mineral, or fossils on installation lands for valid scientific purposes when compatible with the mission, approved by the installation or wing commander or designated representative, and the required federal or state permits have been obtained. Access related to partnering efforts with other federal agencies, state agencies and institutions, or other conservation organizations is encouraged under conditions where such activities adhere to pertinent mission, security, safety, and legal restrictions.

16.4. Special Natural Areas. Areas on AF installations that contain natural resources that warrant special protection efforts may, where consistent with the military mission, be designated in the INRMP as a Special Natural Area. Special Natural Areas may include botanical areas, ecological reserves, geological

areas, riparian zones, scenic areas, and zoological reserves. The INRMP will identify applicable access and land-use restrictions for each designated area. A Special Natural area designation in an INRMP is a temporary status that is applicable for the period covered by the INRMP, and can be rescinded by order of the Installation or Wing Commander. Such areas will be reassessed if the military mission requirements of the installation change, during any installation realignment or closure action involving the property, or if the property becomes excess and requires disposal.

16.5. Special Restrictions for Disclosing Natural Resources Information. An installation may determine that the disclosure of information on the location or character of sensitive natural resources may create a substantial risk of harm, theft, or destruction of such resources, an invasion of privacy, trespass on Government property, or interfere with the military mission. In such cases, the installation will ensure that documents and other data voluntarily provided to the public do not disclose this information. Denial of requests for information under the Freedom of Information Act, Title 5, United States Code, Section 552, as amended by P.L. 104-231, must meet the criteria for appropriate exemptions stated in DoD Regulation 5400.7-R, *DoD Freedom of Information Act Program, 4 September 1998*, and the Air Force supplement to DoD Regulation 5400.7, *Department of Defense Freedom of Information Act Program*.

Chapter 17

NATURAL RESOURCES MANAGEMENT TRAINING

17.1. Natural Resources Awareness Training. Encourage individuals living or working on AF installations to demonstrate good environmental stewardship. Incorporate environmental and natural resources awareness training into newcomer's orientation briefings and information forums at all levels. The INRMP will identify the appropriate natural resources awareness training goals for the installation.

17.2. Commander Awareness. The *DoD Commander's Guide to Biodiversity* provides basic natural resources management guidance for installation or wing commanders. The Executive Summary of the INRMP will make the installation and wing commanders, installation civil engineers, and other senior officers aware of installation natural resources and inform them of how the natural resources management program supports mission objectives.

17.3. Training Professional Natural Resources Managers.

17.3.1. Natural resources managers at Category I installations (see [2.2.1.](#)) must take the course, *DoD Natural Resources Compliance*, developed by the DoD Interservice Environmental Education Review Board (ISEERB) and offered for all DoD Components by the Naval School, Civil Engineer Corps Officers School (CECOS). See the CECOS website <https://www.cecos.navy.mil> for schedules and registration information. Other DoD environmental management courses can be found at the Army Logistics Management College (<http://www.almc.army.mil/catalog/courseDescriptions.html>) and Air Force Institute of Technology (<http://cess.afit.af.mil>).

17.3.2. Encourage installation natural resources managers to attend appropriate national, regional, and state conferences and training courses. The National Conservation Training Center managed by the USFWS (<http://www.nctc.fws.gov/>) and the Bureau of Land Management Training Center (<http://www.ntc.blm.gov/>) offer a wide range of appropriate natural resources professional courses suitable for AF natural resources managers. Encourage natural resource management personnel to attain professional registration, certification, or licensing for their related fields.

17.3.3. All individuals enforcing fish, wildlife and natural resources laws on AF lands must receive specialized, professional training on the enforcement of fish, wildlife and natural resources in compliance with the Sikes Act. This training may be obtained by acquiring certification as a state fish and wildlife conservation law officer or by successfully completing the Natural Resources Police Training Program course at the Federal Law Enforcement Training Center (<http://www.fletc.gov/>). Tribal law enforcement certification is also appropriate within tribal jurisdiction. Correspondence courses and standard Security Forces training do not meet the requirements of the Sikes Act.

17.3.4. Individuals participating in the capture and handling of sick, injured, or nuisance wildlife should receive appropriate training.

17.3.5. Natural resources personnel supporting the BASH program should receive flight line drivers training, training in identification of bird species occurring on airfields, and specialized training in the use of firearms and pyrotechnics as appropriate for their expected level of involvement. _

17.3.6. The DoD supported publication *Conserving Biodiversity on Military Lands -- A Handbook for Natural Resources Managers* (Leslie et. al. 1996) provides information regarding the management of natural resources programs.

DONALD J. WETEKAM, Lt General, USAF
DCS/Installations & Logistics

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

32 CFR. Part 190, *Appendix--Integrated Natural Resources Management*

32 CFR. Part 989, *Environmental Impact Analysis Process (EIAP)*

AFI 13-212, Volume 1, *Range Planning and Operations*

AFI 32-1021, *Planning and Programming of Military Construction (MILCON) Projects*

AFI 32-1053, *Pest Management Program*

AFI 32-2001, *The Fire Protection Operations and Fire Prevention Program*

AFI 32-7001, *Environmental Budgeting*

AFI 32-7006, *Environmental Program in Foreign Countries*

AFI 32-7020, *The Environmental Restoration Program*

AFI 32-7045, *Environmental Compliance Assessment and Management Program (ECAMP)*

AFI 32-7062, *Air Force Comprehensive Planning*

AFI 32-9003, *Granting Temporary Use of Air Force Real Property*

AFI 36-2817, *Civil Engineer Awards Program*

AFI 65-601, *Budget Guidance and Procedures*, Volume 1

AFI 91-202, *The US Air Force Mishap Prevention Program*

AFI 91-204, *Safety Investigations and Reports*

AFMAN 23-110, Volume II, Part Two, Chap 22, Section K, *USAF Supply Manual*

AFMAN 37-123, *Management of Records*

AFPAM 91-212, *Bird/Wildlife Aircraft Strike Hazard (BASH) Management Techniques*

AFPD 32-70, *Environmental Quality*

AFPD 37-1, *Air Force Information Management*

Agricultural Risk Protection Act of 2000 (Plant Protection Act) (7 U.S.C. 7701-7772)

Animal Damage Control Act (7 U.S.C. 426-426b)

Bald Eagle Act of 1940 (16 U.S.C. 668-668d)

Coastal Barrier Resources Act of 1982 (16 U.S.C. 3509)

Coastal Zone Management Act, as amended (16 U.S.C. 1451 *et. seq.*)

Conservation Programs on Military Installations (Sikes Act), as amended (16 U.S.C. 670 *et. seq.*)

DoD Commander's Guide to Biodiversity, 1996, Keystone Center, Keystone, CO

DoDD 6055.6-M, *Department of Defense Fire and Emergency Services Certification Program*, December 1995

DODI 4715.3, *Environmental Conservation Program*, May 3, 1996

DoDI 6055.6, *DoD Fire and Emergency Services Program*, October 10, 2000

DoD Financial Management Regulation Volume 11A, Chapter 16, *Accounting for Production and Sale of Forest Products*, August, 2002.

DoD Regulation 5400.7-R, *DoD Freedom of Information Act Program*, May 22, 1997

Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543)

Estuary Protection Act (16 U.S.C. 1221-1226)

Executive Memorandum, April 26, 1994, *Environmentally and Economically Beneficial Practices on Federal Landscaped Grounds*.

Executive Order 11514, *Protection and Enhancement of Environmental Quality*, March 5, 1970

Executive Order 11988, *Flood plain Management*, May 24, 1977

Executive Order 11989, *Off-Road Vehicles on Public Lands*, May 24, 1977

Executive Order 11990, *Protection of Wetlands*, May 24, 1977

Executive Order 12962, *Recreational Fisheries*, June 6, 1995

Executive Order 13089, *Coral Reef Protection*, June 11, 1998

Executive Order 13112, *Invasive Species*, February 3, 1999

Executive Order 13148, *Greening the Government Through Leadership in Environmental Management*, April 22, 2000

Executive Order No. 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, January 10, 2001

Farmland Protection Act (7 U.S.C. 4201 *et. seq.*)

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended (7 U.S.C. 136 *et. seq.*)

Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701)

Federal Noxious Weed Act of 1976 (7 U.S.C. 2801)

Federal Water Pollution Control Act of 1977 (Clean Water Act), as amended (33 U.S.C. 1251-1376)

Fish and Wildlife Conservation Act of 1980 (16 U.S.C. 2901)

Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 *et. seq.*)

Forest and Rangeland Renewable Resources Planning Act of 1974 (16 U.S.C. 1601 *et. seq.*)

Hunting, Fishing and Trapping on Military Lands [An update of the Military Construction Authorization Act] (10 U.S.C. 2671)

Lacey Act of 1900 (16 U.S.C. 701, 702)

Leslie, M., G.K. Meffe, J.L. Hardesty, and D.L. Adams. 1996. *Conserving Biodiversity on Military Lands -- A Handbook for Natural Resources Managers*. The Nature Conservancy, Arlington, VA.

Marine Mammal Protection Act of 1972 (16 U.S.C. 1361)

Migratory Bird Treaty Act, as amended (16 U.S.C. 703 *et. seq.*)

National Defense Authorization Act for Fiscal Year 2003 (P.L. 107-314)

National Defense Authorization Act for Fiscal Year 2004 (P.L. 108-136)

National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S.C. 4321-4347)

National Trails Systems Act of 1986 (16 U.S.C. 1241-1249)

NFES 1279 – *Prescribed Fire Smoke Management Guide*

NFES 1414 – *Wildland Fire Qualification Subsystem Guide*

NFES 1596 – *Fitness and Work Capacity*

NFES 2071 – *Fit to Work, Fatigue and the Firefighter*

NFPA 295 – *Standard for Wildfire Control*

NFPA 299 - *Protection of Life and Property from Wildfire*

NFPA 1002 – *Standard for Fire Apparatus Driver/Operator Professional Qualifications*

NFPA 1051 – *Standard for Wildland Fire Fighter Professional Qualifications*

NFPA 1500 – *Standard on Fire Department Occupational Safety and Health Program*

NFPA 1582 – *Standard on Medical Requirements for Fire Fighters*

NFPA 1977 – *Protective Clothing and Equipment for Wildland Fire Fighting*

Outdoor Recreation on Federal Lands (16 U.S.C. 460(l))

Outleasing for Grazing and Agriculture on Military Lands (10 U.S.C. 2667(d)(4))

Protection of Fossils on Federal Lands (43 U.S.C. 1701 *et. seq.*, 18 U.S.C. 641, and 18 U.S.C. 1361).

Rivers and Harbors Act of 1899 (33 U.S.C. 401 *et. seq.*)

Sikes Act (16 USC 670a-f), as amended

Soil and Water Conservation Act (16 U.S.C. 2001)

Taylor Grazing Act (43 U.S.C. 315 *et. seq.*)

Timber Sales on Military Lands [An update of the Military Construction Authorization Act] (10 U.S.C. 2665)

UFC 3-260-01, *Airfield and Heliport Planning and Design*

Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271-1287)

Wild Horses and Burros Act (16 U.S.C. 1331-1340)

Abbreviations and Acronyms

ABI—Association for Biodiversity Information

AF—Air Force

AFCEE—Air Force Center for Environmental Excellence

AFCESA—Air Force Civil Engineering Support Agency

AFEMS—Air Force Equipment Management System

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPAM—Air Force Pamphlet

AFPD—Air Force Policy Directive

AFRPA—Air Force Real Property Agency

AICUZ—Air Installation Compatible Use Zone

ANG—Air National Guard

BASH—Bird/Wildlife Aircraft Strike Hazard

BHWG—Bird Hazard Working Group

BMPs—Best Management Practices

BRAC—Base Realignment and Closure

CA/CRL—Custodian Account/Custodian Receipt Listing

CATEX—Categorical Exclusion

CECOS—Civil Engineer Corps Officers School

CEQ—Council on Environmental Quality

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CEV—Civil Engineering Environmental Flight

CFR—Code of Federal Regulations

CPR—Cardio-Pulmonary Resuscitation

CWA—Clean Water Act

CZMA—Coastal Zone Management Act

CZMP—Coastal Zone Management Program

DOD—Department of Defense

DODD—Department of Defense Directive

DODI—Department of Defense Instruction

EA—Environmental Assessment

ECAMP—Environmental Compliance Assessment and Management Program

EIAP—Environmental Impact Assessment Process

EIS—Environmental Impact Statement

EMS—Environmental Management System ()

E.O.—Executive Order

EPA—Environmental Protection Agency

EPC—Environmental Protection Committee

ERP—Environmental Restoration Program

ESA—Endangered Species Act

ESOH CAMP—Environmental, Safety, and Occupational Health Compliance Assessment Management Program

ESOHMS—Air Force Environment, Safety, and Occupational Health Management System

FEMA—Federal Emergency Management Agency

FFCP—Fire Fighter Certification Program

FGS—Final Governing Standards

FONPA—Finding of No Practicable Alternative

FONSI—Finding of No Significant Impact

GCEBA—Golf Course Environmental Baseline Assessment

GEM—Golf Environmental Management

GSU—Geographically Separated Unit

HQ AFCEE—Headquarters Air Force Center for Environmental Excellence

HQ AFCESA—Headquarters Air Force Civil Engineering Support Agency

HQ USAF—Headquarters United States Air Force

HQ USAF/ILE—The Civil Engineer, Headquarters United States Air Force

IAW—In Accordance With

INRMP—Integrated Natural Resources Management Plan

IPM—Integrated Pest Management

ISEERB—Interservice Environmental Education Review Board

MAJCOM—Major Command

NEPA—National Environmental Policy Act

NFIP—National Flood Insurance Program

NFPA—National Fire Protection Association

NOAA Fisheries—National Oceanic and Atmospheric Administration, National Marine Fisheries Service

NRCS—Natural Resources Conservation Service

NRI/D—Natural Resources Injury/Damage

NWCG—National Wildfire Coordinating Group

NWI—National Wetlands Inventory

OBA—Operating Budget Authority

OCONUS—Outside Continental United States

OEBGD—Oversees Environmental Baseline Guidance Document

O&M—Operations and Maintenance

OSD—Office of the Secretary of Defense

P.L.—Public Law

ROD—Record of Decision

SAF/IE—Assistant Secretary of the Air Force (Installations, Environment and Logistics)

SAF/IEE—Deputy Assistant Secretary of the Air Force (Environment, Safety and Occupational Health)

SAF/IEI—Deputy Assistant Secretary of the Air Force (Installations)

SERDP—Strategic Environmental Research and Development Program

TACR—Table of Allowance Change Request

T/E—Threatened and Endangered

TNC—The Nature Conservancy

USACE—United States Army Corps of Engineers

U.S.C.—United States Code

USDA—United States Department of Agriculture

USFS—United States Forest Service

USFWS—United States Fish and Wildlife Service

WFMP—Wildland Fire Management Plan

Terms

Adaptive Ecosystem Management —A systematic process for continually improving natural resources management policy and practices by continually monitoring current operations and applying lessons learned to modify these programs as warranted.

Agricultural Outgrant —The use of DoD lands under a lease, license or permit to an agency, organization, or person for growing crops or grazing animals.

Agricultural Land Improvements —Improvements that add potential value to an agricultural outgrant such as irrigation features, fences, cattle guards, water developments, livestock enclosures and other structural improvements, as well as non-structural improvements such as seeding, fertilizing, and vegetation management.

Airfield —The area comprised of runways, taxiways, aprons and other adjacent land areas of an airport which are dedicated to aircraft operations.

Alien Species —Any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to a respective ecosystem [E.O. 13112].

Biodiversity —Also stated as ‘Biological Diversity’. The variety of life forms, the ecological roles they perform, the genetic variability among them, and their interactions in the communities and ecosystems in which they live. Biodiversity Conservation is a land management practice whereby maintaining and establishing viable populations of all native species is a primary goal.

Commercial Forest Land —Land under management capable of producing at least 20 cubic feet of merchantable timber per acre a year.

Cooperative Agreement —A written agreement between an AF organization and one or more outside agencies (federal, state, or local), conservation organizations, or individual for the planning and implementation of natural resources program requirements.

Critical Habitat —Any air, land, or water area and constituents thereof that the USFWS or NOAA Fisheries has designated as critical habitat in accordance with the Endangered Species Act. The ESA, Section 3, defines critical habitat as: (i) the specific area within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of this Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of this Act, upon a determination by the Secretary that such areas are essential for the conservation of the species.

Cropland —Land primarily suitable for producing farm crops, including grain, hay, and truck crops.

Ecosystem Management —An approach to natural resources management that focuses on the interrelationships of ecological processes linking soils, plants, animals, minerals, climate, water, and topography.

Endangered Species —Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man [ESA, Section 3]. For the purposes of this instruction, the term endangered species refers to a species that has been designated for special protection and management by the federal government pursuant to the Endangered Species Act.

Exotic Species —Any plant or animal not native or indigenous to a region, state, or country.

Floodplains —Lowland and relatively flat areas adjoining inland and coastal waters including flood prone areas of offshore islands, including at a minimum, that area subject to a one percent or greater chance of flooding in any given year [E.O. 11988].

Forest Land —Land on which forest trees of various sizes constitute at least 10 percent of the area. This category includes open land that is capable of supporting trees and is planned for forest regeneration and management.

Forest Products —Plant materials in wooded areas that have commercial value, such as sawlogs, veneer (peeler) logs, poles, pilings, pine needles, cordwood (for pulp, paper, or firewood), fence posts, mine

timber, Christmas trees (from unsheared trees cut during intermediate harvests), and similar wood or chemical products.

Game —Any species of fish or wildlife for which state or federal laws and regulations prescribe hunting seasons and bag or creel limits.

Habitat —An area that provides the environmental elements of air, water, food, cover, and space necessary for a given species to survive and reproduce.

Improved Grounds —A grounds maintenance land use category used to indicate scope and intensity of land management (see [Chapter 11](#)). Includes land occupied by buildings and other permanent structures as well as lawns and landscape plantings on which personnel annually plan and perform intensive maintenance activities. Improved Grounds include the cantonment area, parade grounds, drill fields, athletic areas, golf courses (excluding roughs), cemeteries, and housing areas. Grass in these areas is normally maintained at a height of 2-4 inches during the growing season.

Integrated Natural Resources Management Plan (INRMP) —A plan based on ecosystem management that describes and delineates the interrelationships of the individual natural resources elements in concert with the mission and land use activities affecting the basic land management plans. Defines the natural resources elements and the activities required to implement stated goals and objectives for those resources.

Integrated Pest Management (IPM) —A planned program incorporating continuous monitoring, education, record-keeping, and communication to prevent pests and disease vectors from causing unacceptable damage to operations, people, property, materiel, or the environment. IPM includes methods such as habitat modification, biological control, genetic control, cultural methods, mechanical control, physical control, regulatory control, and the judicious use of least-hazardous pesticides.

Invasive Species —An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health [E.O. 13112].

Land Management Unit —The smallest land management division that planners use in developing specific strategies to accomplish natural resources management goals. Land management units may correspond to grazing units on agricultural outgranted lands, stands or compartments on commercial forest lands, various types of improved grounds (for example, athletic fields, parks, yards in family housing, or landscaped areas around administrative buildings), or identifiable semi-improved grounds (for example, airfield areas, utility rights-of-way, or roadside areas).

Livestock —Domestic animals kept or raised for food, by-products, work, transportation, or recreation.

Natural Resources Management Professional —A person with a degree in the natural sciences who manages natural resources on a regular basis and receives periodic training to maintain proficiency in that job.

Noxious Weed —Any plant or plant product that can directly or indirectly injure or cause damage to crops (including nursery stock or plant products), livestock, poultry, or other interests of agriculture, irrigation, navigation, the natural resources of the United States, the public health, or the environment.

Nuisance Wildlife —Wildlife that damages property, impedes installation operations, or endangers public health and safety to the point where control measures are required. This category excludes wildlife species protected under the auspice of the Endangered Species Act or Migratory Bird Treaty Act.

Outdoor Recreation —Recreation that relates directly to and occurs in natural, outdoor environments.

Outdoor Recreation Resources —Land and water areas and associated natural resources that provide, or have the potential to provide, opportunities for outdoor recreation for present and future generations.

Reforestation —The renewal or regeneration of a forest by natural or artificial means.

Semi-Improved Grounds —A grounds maintenance land use category used to indicate scope and intensity of land management (see [Chapter 11](#)). Grounds where periodic maintenance is performed primarily for operational reasons (such as erosion and dust control, bird control, and visual clear zones). This land use classification includes areas adjacent to runways, taxiways, and aprons; runway clear zones; lateral safety zones; rifle and pistol ranges; weapons firing and bombing ranges; picnic areas; ammunition storage areas; antenna facilities; and golf course roughs. Semi-improved grounds areas are mowed less often than the maintained turf grass on improved grounds.

Stewardship —The management of a resources base with the goal of maintaining or increasing the resources' value indefinitely into the future.

Threatened Species —Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range [ESA, Section 3]. For the purposes of this instruction, the term threatened species refers to a species that has been designated for special protection and management by the federal government pursuant to the Endangered Species Act.

Unimproved Grounds —A grounds maintenance land use category used to indicate scope and intensity of land management (see [Chapter 11](#)). Unimproved grounds are areas not classified as 'improved' or 'semi-improved'. Unimproved grounds include forest lands; croplands and grazing lands; lakes, ponds, and wetlands; and any areas where natural vegetation is allowed to grow unimpeded by maintenance activities.

Urban Forests —Planted or remnant native tree species existing within urbanized areas such as parks, tree-lined residential streets, scattered tracts of undisturbed woodlands, and cantonment areas.

Watchable Wildlife Areas —Areas identified under the Watchable Wildlife Program as suitable for passive recreational uses such as bird watching, nature study, and other nonconsumptive uses of wildlife resources.

Wetlands —Areas that are inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds [E.O. 11990].

Attachment 2

INRMP OUTLINE

A2.1. Application. This outline serves as a guideline for an installation Integrated Natural Resources Management Plan (INRMP). For additional guidance on INRMP development and implementation, refer to *Resources for Integrated Natural Resources Management Plan (INRMP) Implementation -- A Handbook for the DoD Natural Resources Manager*, January 2002 (<https://www.denix.osd.mil/denix/Public/ES-Programs/Conservation/Legacy/INRMP/inrmp.html>).

A2.2. Format and Content. Title 32, Code of Federal Regulations, Part 190 *Appendix—Integrated Natural Resources Management* indicates the mandatory requirements for an INRMP. The recommended format and content for AF INRMP documents is presented below. Installations may vary INRMP format and content, as needed, to better represent unique installation natural resources issues and mission requirements.

Cover Page. The INRMP cover page includes the INRMP title and name of the installation.

Signature Page. The second page inside an INRMP includes the signature lines for those people who approve the INRMP and major revisions to the INRMP. At a minimum, signature blocks should be included for the installation or wing commander, the Regional Director of the U.S. Fish and Wildlife Service (USFWS), and the Director of the appropriate state natural resource agency. The effective date of the INRMP begins on the date of the last required signature.

Annual Review and Coordination Page. Include a page that can be used to certify the annual review and coordination of the INRMP (see 2.6.). Provide lines for signatures and dates by the designated certifying authorities.

Table of Contents. Include the following:

- Table of Contents (Chapter and major section headings with page locations).
- List of Figures.
- List of Tables.
- Acronyms and Abbreviations.

Chapter 1 - Executive Summary. The Executive Summary should be no more than 1-2 pages for most installations. The Executive Summary must be able to answer the following questions:

- What is the purpose of the INRMP?
 - Explain the purpose and scope of the INRMP.
 - Describe how the INRMP supports the AF mission.
- Summarize the benefits of INRMP implementation.

- What will implementation of the INRMP do?
 - List the primary natural resources management goals stated in the INRMP.
 - Indicate if the implementation of INRMP goals will be a significant change in management direction for the installation.
- What are the significant environmental impacts of INRMP implementation?

Chapter 2 - General Information.

2.1. Purpose.

- Discuss how the INRMP will be used to guide natural resources management on the installation.
- State the scope of the INRMP in terms of area and resources covered.
- State the function of the INRMP for installation management. Explain how the INRMP ensures that natural resource conservation and other AF mission activities are integrated and consistent with federal mandates for land stewardship.

2.2. Authority. Explain the laws, regulations, and directives that authorize the development and implementation of an INRMP. At a minimum, include the following citations:

- The Sikes Act, 16 U.S.C. 670 *et. seq.*
- Department of Defense Instruction DoD Instruction 4715.3, *Environmental Conservation Program*, May 3, 1996.
- Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*.
- Air Force Instruction AFI 32-7064, *Integrated Natural Resources Management*.

2.3. Responsibilities. Indicate the responsibility of each of the installation command elements, if applicable, for oversight and implementation of the INRMP. Examples are:

- Installation or wing commander.
- Air Base Group Commander.
- Environmental Protection Committee.
- Base Civil Engineer.
- Civil Engineering, Environmental Division (CEV).
- Commanders of assigned and tenant units.

2.4. Management Philosophy.

- Describe how the INRMP supports the AF military mission.

- Explain how the INRMP was developed in an interdisciplinary manner.
- State how the INRMP implements the AF principles for ecosystem management (refer to AFI 32-7064, paragraph 2.9.).
- Explain how the INRMP supports the Base Comprehensive Planning Process.

2.5. Conditions for Implementation and Revision.

2.5.1. Implementation. Indicate the organizations responsible for implementation of the INRMP and who will conduct the annual review of the INRMP (EPC, MAJCOM, etc.).

2.5.2. Revisions. Explain the required 5-year review of the INRMP, how updates will be incorporated, and the conditions under which a significant revision would be required at a less than 5-year interval (e.g. mission realignment).

Chapter 3 - Installation Overview.

3.1. Location and Area. Describe basic information about the location, size, military mission, and history of the installation. Include information on satellite installations covered by the plan.

3.2. Installation History. Describe the origin of the installation, previous missions, and developmental history. Review former land uses and management practices.

3.3. Military Mission. Describe the current military mission, major units, and command structure, as appropriate. Include information regarding important tenant units on the installation.

3.4. Surrounding Communities. Identify nearby cities and towns. Give a demographic overview of communities in the vicinity of the installation. Describe the land uses directly adjacent to the installation boundaries. Identify trends in land use surrounding the installation that may jeopardize the military mission of the installation (i.e. encroachment issues).

3.5. Regional Land Use. Identify and describe the region that encompasses the installation in terms of political, socio-economic, and eco-regional boundaries. Discuss the local area and region in terms of the condition of the land and its natural resources.

3.6. Local and Regional Natural Areas. Identify the presence of any parks, preserves, refuges, greenways, river corridors, or other natural areas with ecologically unique and significant natural resources

within five miles of the installation; and indicate if they contain any habitat similar to that found on the installation.

Chapter 4 - Physical Environment.

4.1. Climate. Generally describe the climate. Portray the climate in terms that illustrate how the weather affects the local ecosystems. Of importance is annual rainfall, seasonality of rainfall, the average and extremes of temperature, the length of growing season, and any unique factors affecting the ecosystem such as a frequency of hurricanes, ice storms, etc. Attach a climate table showing average/maximum/minimum temperatures, precipitation, and other installation climatic statistics.

4.2. Landforms. Describe in general terms the physiographic region and topography.

4.3. Geology and Soils. Describe the geology of the installation and surrounding region. Briefly describe the soil associations found on the installation in broad terms. Do not give detailed physical descriptions of each soil series and its management limitations. Instead, focus on the general qualities of the installation's soils that may limit management options or affect the potential flora and fauna on the installation. Reference the appropriate USDA Soil Survey report for the county, and any other studies or reports where an interested reader can obtain more detailed soil information.

4.4. Hydrology. Describe the installation drainage patterns respect to the watershed boundaries. Provide basic facts on installation groundwater, surface water, impoundments, wetlands, floodplains, and natural and artificial drainage ways. Discuss water quantity, quality, use, and other characteristics such as droughts, flood frequency, and seasonal variations in rainfall. Include an installation map showing hydrologic features.

Chapter 5 – Ecosystems and the Biotic Environment.

5.1. Ecosystem Classification. Provide an ecosystem based land classification description for the installation and adjacent areas. Recommend using the National Hierarchical Framework of Ecological Units (also known as Bailey's Ecoregions). The National Hierarchical Framework is a regionalization classification and mapping system that links soils, physiography, and habitat types to stratify the landscape into progressively smaller areas (i.e. Ecoregion-Domain-Division-Province-Subregion-Section-Subsection-Landtype Association-Landtype). Delineate ecological units for the installation and surrounding area to the lowest level feasible.

5.2. Vegetation. Describe the historic and current vegetation associations for the ecological units within and surrounding the installation.

5.1.1. **Historic Vegetative Cover.** Portray the historic vegetative cover for the installation and vicinity prior to European settlement. If available, include historical photographs and references to written excerpts from historical accounts of the vegetation cover during early settlement times.

5.1.2. **Current Vegetative Cover.** Describe the current vegetational communities for the ecological units found on the installation. Provide a map showing the current distribution of vegetation associations.

5.1.3. **Turf and Landscaped Areas.** Discuss the predominate varieties of turf grass, ground cover, tree and shrub species to be found in the developed areas of the installation.

5.3. Fish and Wildlife. Provide a general description of the diversity of fish and wildlife found on the installation. Do not include a comprehensive species list in the main text of the INRMP. You may reference a species list in the Appendix if such a list is deemed important to the INRMP. Also include any information available regarding the distribution and quality of fish and wildlife habitats.

5.4. Threatened and Endangered Species. Indicate if there are any known or potential threatened or endangered species listed by the USFWS or state. Provide important management information and data on any known or potential threatened or endangered species, including potential seasonal migrants. Provide maps of any species or habitats of concern on the installation or near the installation. Identify gaps in data regarding the occurrence of listed species.

5.5. Wetlands. Identify the presence of wetlands on the installation. Discuss any wetland surveys or jurisdictional delineations that have been performed.

5.6. Other Natural Resource Information. Describe and summarize other biological inventories and surveys conducted on the installation that provide information applicable to natural resources program management.

Chapter 6 - Mission Impacts on Natural Resources.

6.1. Land Use. Provide the total installation acreage and the general distribution of land uses categorized as improved, semi-improved, and unimproved lands (see [Attachment 1](#) for definitions). Show the land use distribution on an installation map.

6.2. Current Major Impacts. Describe current mission impacts that affect or may potentially affect natural resources. Briefly discuss major pollution concerns and programs, such as:

- The number of permitted air and water pollution point sources.

- AICUZ or other noise problems associated with airfield operations, low-level training routes, or ranges.
- On-going problems with hazardous waste.
- Ground water contamination and ERP sites.

6.3. Potential Future Impacts. Describe known future mission impacts on installation natural resources. Describe potential mission impacts on local and regional natural areas and federally designated critical habitats near the installation. Summarize the potential impacts of projected changes in missions, Base Realignment and Closure (BRAC), and other mission elements. Provide a reference to the General Plan or other component plans that detail proposed future development activities.

6.4. Natural Resources Needed to Support the Military Mission. Describe the natural resources that are necessary to support the military mission (e.g. stable soils, vegetation for concealment, open areas for testing, etc.).

6.5. Natural Resources Constraints to Missions and Mission Planning. Identify all natural resource protection issues that have the potential to pose a constraint to future development and mission expansion. Include natural resources constraints to missions and mission planning associated with land uses in the immediate vicinity outside the installation boundary. Develop a composite map of major constraints such as critical habitat for T/E species, wetlands, flood plains, sensitive plant communities, highly erodible soils, and steep slopes.

Chapter 7 - Natural Resources Program Management. Use this chapter to describe the current status of the installation natural resources management programs. For each program area listed below, describe the current management practices used to manage these resources. Include descriptions of common day-to-day management practices (i.e. prescribed burning, monitoring, etc.) as well as ongoing special initiatives to address a particular resource problem. Discuss the origin and status of significant management issues, such as those related to base missions, compliance with regulatory requirements, or sensitive public relations issues. If a program element in this outline does not exist on the installation, omit that section from the INRMP. Cover the following program areas, if applicable.

7.1. Natural Resources Program Management. In this section, describe the organization necessary to implement the INRMP. Note that the installation, as a whole, is responsible for implementation of the INRMP, but that there are certain offices of primary responsibility for portions of the INRMP. Identify:

- Organizations on the installation that are important for the implementation of the INRMP. Identify the roles and responsibilities of each organization. Provide an organizational chart if helpful.
- Other Defense organizations that will assist with the implementation of the INRMP (e.g. MAJCOM, AFCEA, etc.).
- Other federal agencies that contribute to implementation of the INRMP. Specifically identify the USFWS as a signatory agency and their role, if any, in INRMP implementation.

- State agencies that contribute to the implementation of the INRMP. Identify the appropriate INRMP signatory agency for the state.
- Universities involved in the implementation of the INRMP.
- Contractors that have a role in the implementation of the INRMP. You may mention a support contractor by name if the contract has been awarded and is still active.

7.2. Geographic Information Systems (GIS). Indicate if the installation manages a GIS that contributes to natural resources management planning and decision making. Describe the coverages included in the database that are important for natural resources management. Discuss equipment availability, resources mapping status, and interface with the Base Comprehensive Planning process.

7.3. Fish and Wildlife Management. Discuss:

- Fish and wildlife program management.
- Enforcement of fish and wildlife laws.
- Hunting, fishing, trapping program organization and management.
- Hunting and fishing policy, regulations, and fee structures.
- Permitted access for hunting, fishing, trapping, and wildlife-related outdoor recreation.
- Demand for hunting, fishing, and non-consumptive resource uses.
- Watchable Wildlife areas
- Wildlife education and interpretation programs.
- Wildlife pest problems and techniques used for wildlife control.
- Policies, programs and methods used to control feral animals.
- Requirements for fish and wildlife habitat improvement.
- Measures to protect significant fossil resources.

7.4. Management of Threatened and Endangered Species and Habitats. Discuss:

- The status of T/E inventories.
- Ongoing T/E monitoring programs.
- Current Biological Opinions for T/E species, and their Terms and Conditions.
- Current consultations under ESA Section 7.
- Other ongoing programs to manage T/E species.
- Health of existing on-installation habitats of concern.
- Relationship of any on-installation habitats of concern with similar local and regional critical habitat.

7.5. Water Resource Protection. Discuss:

- Regional issues related to watersheds affected by the installation.
- Waste water or storm water management issues.
- Regional programs (e.g. Chesapeake Bay Protection Act).
- Non-point source pollution issues.
- Water quality monitoring programs and sampling points.
- Cooperative programs with other governmental or private organizations.

7.6. Wetland Protection. Discuss:

- Health of existing wetlands.
- The status of wetland inventories and delineations.
- Programs for long-term monitoring of wetlands
- Pending Section 404 and 401 permits.
- Approvals pending Section 10 of the Rivers and Harbors Act.
- Current programs and plans for wetland restoration and enhancement
- Any involvement with local or regional wetlands banking.

7.7. Grounds Maintenance. Discuss:

- Disease, insect, and general maintenance issues associated with turf areas and ornamental planting areas. Reference the Integrated Pest Management Plan.
- Non-point source pollution issues associated with landscape pesticides and fertilizers.
- Programs handling solid wastes associated with grounds maintenance activities.
- Urban forestry program management and issues, to include a Tree City USA program.

7.8. Forest Management. Discuss:

- The current forest management program and initiatives.
- Forest types found on the installation. If available, show the distribution of forest types by table, graph or map.
- The current status and scope of commercial forestry operations.
- The existing network of forest access roads and trails.
- The acceptable timber harvesting practices for the installation.
- Forest management issues and concerns.
- How forest management practices can be used to achieve INRMP goals.

7.9. Wildland Fire Management. Refer to the installation Wildland Fire Management Plan (if applicable). Briefly Discuss:

- The history and frequency of wildfires on the installation.
- The threat of wildfire to the mission and natural resources.
- The organizational structure for wildland fire protection and wildfire response protocols.
- The use of prescribed fire on the installation, and program objectives.

7.10. Agricultural Outleasing. An INRMP for installations with cropland or grazing outgrants must include the following elements:

- A description of how cropland and grazing outgrants support INRMP goals.
- The location of lands outgranted for crop production or grazing leases.
- Identity of prime and unique farmlands, as determined through consultation with the Natural Resources Conservation Service.
- An analysis of soil fertility and crop production suitability for cropland areas.
- A list of the principal forage species being grazed by livestock, and how these plants are being monitored and managed.
- A discussion of expected livestock utilization patterns.
- A discussion of appropriate livestock stocking rates.
- A protocol for outgrant management that identifies the parameters that will be used to determine when livestock can graze various pastures and when to remove or reduce grazing pressure in order to sustain overall ecosystem health and integrity.
- A discussion of the outgrant land use regulations for outgrantees, and how compliance with the land use regulations will be monitored.
- A description of existing and proposed improvements within outgrants, and a description a out-grantee services rendered in lieu of a portion or all of the cash payment due the United States Government.

7.11. Integrated Pest Management Program. Reference the installation IPM Plan. Discuss:

- Pest species that inter-relate to and potentially affect natural resources management on the installation.
- Invasive species and ongoing control initiatives.
- Species designated as ‘noxious weeds’ by government entity.
- How the natural resources management program supports installation IPM Plan objectives.

7.12. Bird/Aircraft Strike Hazard (BASH). Reference the installation BASH plan. Discuss:

- Issues of the BASH program that relate to natural resources management on the installation.
- Existing and potential hazards to aircraft operations posed by wildlife.
- How the natural resources management program supports BASH plan objectives.

7.13. Outdoor Recreation. Discuss:

- Areas suitable for outdoor recreation activities.
- Current use of installation unimproved lands for dispersed outdoor recreation.
- Demand for outdoor recreation opportunity on the installation.
- Interface with Air Force Services Outdoor Recreation programs.
- Outdoor recreation policy, regulations, and fee structures.
- Policy on off-road vehicle and mountain bike use on installation lands.
- Issues related to public access for outdoor recreation and access restrictions.

7.14. Coastal Zone Management. Discuss:

- Coastal America program involvement.
- Marine animal protection.
- Coastal Zone Protection issues.
- Coastal Barrier Resources.
- Consistency with state Coastal Zone Management Program.
- Presence of coral reefs, endemic mangrove and sea grass ecosystems.

7.15. Cultural Resources Protection. Reference the installation Integrated Cultural Resources Management Plan. Focus on those elements of the natural resources program that inter-relate to and may potentially affect cultural resources on the installation.**7.16. Enforcement.** Discuss:

- Organization and history of a natural resources law enforcement program.
- Jurisdiction (exclusive, concurrent, proprietary) on the installation with regard to enforcement of natural resources laws.
- Source of authority for natural resources law enforcement.
- Enforcement activities and program emphasis.
- Training and certification requirements for natural resources law enforcement personnel.

7.17. Public Outreach. Discuss:

- Organizations involved in public affairs and outreach for natural resources programs.
- Natural resources awareness programs on the installation.
- Brochures, posters, videos and other natural resources program educational materials.

Chapter 8 - Management Goals and Objectives. The emphasis of an INRMP using the format described herein is the achievement of certain goals for the maintenance and improvement of the natural environment at the installation. Chapter 8 lists the goals and objectives for future natural resources management on the installation. Also, in cases where off-installation land uses may jeopardize AF missions, Chapter 8 may list specific goals and objectives aimed at eliminating, reducing or mitigating the affects of encroachment on military missions. Previous chapters present the important background information from which the goals and objectives are formed. Chapter 8 states the natural resources management goals formulated by the preparers of the INRMP from an assessment of the resources, current conditions, and management issues identified in the previous chapters. Consecutively numbered goals are accompanied by supporting objectives and projects in a tiered format as shown in the example below. The relationship between goals, objectives, and projects is as follows:

Goals. Goals are the primary focal points for the implementation of the INRMP over the five years covered by the plan. A goal should reflect the values of the installation by expressing a vision of a desired condition for the installation's natural resources in the foreseeable future. Each goal is supported by one or more objectives.

Objectives. Each goal is supported by objectives which indicate a management initiative or strategy that will be used to achieve the stated goal. An objective specifically states what will be done and how it will be done. An objective must be time-bound and measurable. The objective statement, therefore, should include timelines for completion and quantifiable units for measuring results (e.g. acres treated) so that you are able to determine exactly when the objective is completed. Briefly explain the performance measures that will be used to monitor the success or failure in achieving each objective.

Projects. Projects (or Tasks) are the individual component actions required to achieve an objective. Projects statements describe the specific methods and procedures that will be used (i.e. scopes of work) to achieve the objective supported. Projects are actions that become line items in the proposed budgets (e.g. ACES-PM) for INRMP implementation. Projects must be achievable within the period covered by the INRMP.

Example – Goal with Supporting Objectives and Projects. In the example shown below, note how the format (goal>objective>project) facilitates an integrated approach to natural resource management. By using this approach, work tasks such as tree planting or vegetation control support a goal associated with the principle of ecosystem management, and thus cannot be considered strictly as a "forest management" program element.

GOAL 1: IMPROVE AND EXPAND EXISTING NESTING HABITAT FOR DEEP WOODS AND INTERIOR NEOTROPICAL MIGRANT BIRD SPECIES.

OBJECTIVE 1.1: Identify crucial habitats for deep woods specific neotropical migrant bird species by July 2005.

PROJECT 1.1.1: Conduct avian surveys on all contiguous forested tracts greater than 500 acres by October 2002.

PROJECT 1.1.2: By October 2004, utilize HEP models for the pileated woodpecker and wood thrush to evaluate habitat quality for all contiguous forest tracts greater than 500 acres.

PROJECT 1.1.3: Prepare a final report summarizing the data collected from avian surveys and modeling, and make recommendations for future management by July 2005.

OBJECTIVE 1.2: Decrease forest fragmentation by developing travel corridors between unconnected tracts of forest greater than 500 acres in size. Reforest a minimum of 200 acres by June 2006.

PROJECT 1.2.1: Plant white pine in Agriculture tract 101 by May 2003.

PROJECT 1.2.2: Plant white oak, red oak, and black oak in Agriculture tract 25 by May 2004.

PROJECT 1.2.3: Apply herbicide release treatments for trees planted in Agriculture tracts 25 and 101 by June 2005.

Chapter 9 - Implementation. Individual programs and their associated budgets implement the INRMP. Chapter 10 elaborates more fully on exactly what is going to be done to implement the goals, objectives and projects listed in Chapter 9.

9.1. Work Plans. List INRMP implementation projects in annual work plans in Chapter 9, or as referenced attachments in the appendix, for the five years covered by the INRMP. For each project and activity related to the INRMP, provide a specific timeframe for implementation. Identify funding requirements, appropriate funding source, and priority for implementation. Indicate which projects are “must fund” requirements, as defined by AFI 32-7001, *Environmental Quality Programming and Budgeting*. The work plans should be able to provide all the necessary information for building a budget within the AF framework.

9.2. Natural Resources Management Staffing. In this section, identify the staffing requirements (internal and external) for implementing the INRMP. Do not include installation-wide responsibilities and organizational charts in this section (see paragraph 7.1 above). In this section, identify the job series and labor categories that are necessary for oversight of the natural resources management program and implementation of the INRMP. Additionally, identify any current staffing deficiencies and training needs that may hinder INRMP implementation.

9.3. Annual Coordination Requirements. In this section, provide information on how the annual INRMP review and update will take place on the installation and identify the appropriate agency offices for annual coordination of the INRMP. Discuss how annual feedback will be obtained from the USFWS and state fish and wildlife agency on the effectiveness of the INRMP.

9.4. Monitoring INRMP Implementation. Outline the procedures that will be used for monitoring INRMP implementation, analyzing the results, and any adaptive management strategies that may be used. Identify the metrics that will be used to measure the extent of INRMP implementation.

10. Appendix. Use the Appendix to include information and documents that support the INRMP. The amount of information that can be presented in the Appendix is limitless. However, include as attachments only those items that are pertinent to the resources, management issues, and goals described within the INRMP. INRMPs presented in electronic format may incorporate associated plans and reference documents as hyperlinks to a web server. Potential items for inclusion in the Appendix are:

- Agricultural Outgrant Area Map.
- Agricultural Outgrant Land Use Regulations
- Bird/Wildlife Aircraft Strike Hazard (BASH) Plan (latest version).
- Cooperative Agreements for Natural Resource Management.
- Description of Standard Installation Fish and Wildlife Management Practices.
- Description of Standard Installation Forest Management Practices.
- DoD Conservation Measures of Merit Report (natural resources portion).
- Endangered Species Act Biological Opinions and Biological Assessments.
- Environmental Assessment for the INRMP (or Environmental Impact Statement).
- Finding of No Significant Impact for Implementation of the INRMP (or Record of Decision).
- Floodplain Map.
- Forest Inventory Map and Data Summary.
- Glossary of Terms.
- Golf Course Environmental Management Plan.
- Installation Best Management Practices for Erosion Control, Forestry Operations, etc.

- Installation Procedures and Protocols for Emergency Wildlife Damage Control and Exercising Wildlife Depredation Permits.
- Installation Regulations for Access to Special Natural Areas.
- Installation Regulations for Hunting, Fishing, and Trapping.
- Installation Regulations for Outdoor Recreation Access.
- Integrated Pest Management Plan (latest version)
- Landscape Management Plan (latest version).
- List of Cooperating Agency Points of Contact.
- List of Federal and State Threatened and Endangered Species on the Installation.
- List of Flora and Fauna Species Known to Occur on the Installation.
- List of Invasive and Exotic Species and Noxious Weeds.
- List of Recommended Trees and Shrubs for Installation Landscapes.
- National Wetlands Inventory Maps.
- References Cited in the INRMP.
- Soil Maps.
- State Coastal Zone Consistency Determinations
- State Coastal Zone Permits
- Watchable Wildlife Area Maps.
- Wetland Permits and Mitigation Plans.
- Wildland Fire Management Plan (latest version).

Attachment 3

COORDINATION AND APPROVAL PROCESS FOR INRMP DEVELOPMENT AND REVISION

The following table provides the required steps for the preparation, coordination, and approval of an Integrated Natural Resources Management Plan (INRMP) on Air Force installations. Refer to [Chapter 2](#) and [Attachment 2](#) for additional guidance on INRMP development and implementation.

STEP	ACTION
1	<u>Notification – Intent to Prepare/Revise an INRMP.</u> Notify the USFWS Ecological Services Field Office, USFWS Regional Office, local state fish and wildlife (F&W) agency office, office of the state F&W agency Director, and all appropriate internal and external stakeholders of the intent to prepare or revise an INRMP within 30 days of starting such an action. Also notify the National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries) if the installation includes or is adjacent to marine environments. Develop the framework and schedule for a working partnership with cooperating agencies for INRMP development. If formal consultation under Section 7 of the Endangered Species Act is required, the time frames for that process will apply.
2	<u>Preliminary Draft INRMP – Internal AF Review.</u> Distribute a Preliminary Draft INRMP for internal Air Force review and comment. Air Force internal review must include a MAJCOM review (to include a MAJCOM legal review), and a review by the installation Environmental Protection Committee member organizations. The Preliminary Draft INRMP shall include the first iteration of goal and objective statements for the INRMP.
3	<u>Preliminary Draft INRMP – External Agency Review.</u> After incorporation of internal AF review comments on the Preliminary Draft INRMP, send the Preliminary Draft INRMP with cover letter to the appropriate USFWS Ecological Services Field Office (NOAA Fisheries when appropriate) and state fish and wildlife agency for review and comment. In the cover letter, designate an installation point of contact, and request receipt of comments by a specified date (as determined in Step 1). Send a copy of the forwarding cover letter to the appointed Sikes Act Coordinator for the USFWS Regional Office (and NOAA Fisheries Regional Office when appropriate) and state F&W agency Director's office to inform them that the review process has begun. Insure that copies of any external agency comments are distributed to all cooperating agencies.
4	<u>Draft INRMP.</u> Prepare a Draft INRMP that incorporates, when appropriate, recommendations for improvement to the Preliminary Draft INRMP received during the comment period.
5	<u>Draft INRMP – Public Review.</u> Post a public notification when the draft INRMP is available for review and comment. In the public notice, provide an address for public response, and allow the public a minimum of 30 days to provide comments.

STEP	ACTION
6	<u>Final Draft INRMP.</u> Consider all comments received and incorporate them, as appropriate, into a Final Draft INRMP. Submit the Final Draft INRMP to the Regional Director, USFWS Regional Office (and NOAA Fisheries when appropriate), and to the office of the Director of the state fish and wildlife agency. In the submittal letter, document the actions taken on comments received on previous drafts. Request that the USFWS Regional Director and state Director provide consolidated written comments from all appropriate offices and divisions within 60 days of receipt of the final draft INRMP. Furnish a copy of this letter to the local USFWS Ecological Services Field Office and NOAA Fisheries (when appropriate) and the local state fish and wildlife office. Offer to brief the coordinating agencies on the Final Draft INRMP.
7	<u>Final Coordination Comments.</u> The USFWS Regional Office (and NOAA Fisheries Regional Office when appropriate) and the Director of the state fish and wildlife office provides written comments on the Final Draft INRMP to the installation point of contact within the agreed upon timeline.
8	<u>Final INRMP.</u> Consider all comments received from coordinating agencies and incorporate them into the Final INRMP as appropriate. If no final comments are received from the USFWS, NOAA Fisheries, and state after a period of 120 days, the installation may request expedited review of its INRMP. In such cases, the MAJCOM will submit a written request for expedited review to HQ USAF/ILEV, with copy furnished to the USFWS Regional Director (and NOAA Fisheries Regional Director when appropriate) and Director of the state fish and wildlife agency. HQ USAF/ILEV will make arrangements for representatives from these offices to meet within 30 days of receipt of such a request to resolve any outstanding coordination issues.
9	<u>Signatures.</u> The Installation or Wing Commander (after appropriate legal review), the Regional Director of the USFWS, and the Director of the state fish and wildlife agency sign the Final INRMP. The Regional Director of NOAA Fisheries also signs the document when appropriate.
10	<u>Publishing.</u> Unclassified portions of the final INRMP will be made available electronically via the World Wide Web, CD-ROM, or other similar means. All draft and final INRMP documents should undergo appropriate security review prior to being made available to the public.

Attachment 4

ENDANGERED SPECIES ACT COORDINATION

Figure A4.1. Informal Consultation Process [50 CFR 402.10].

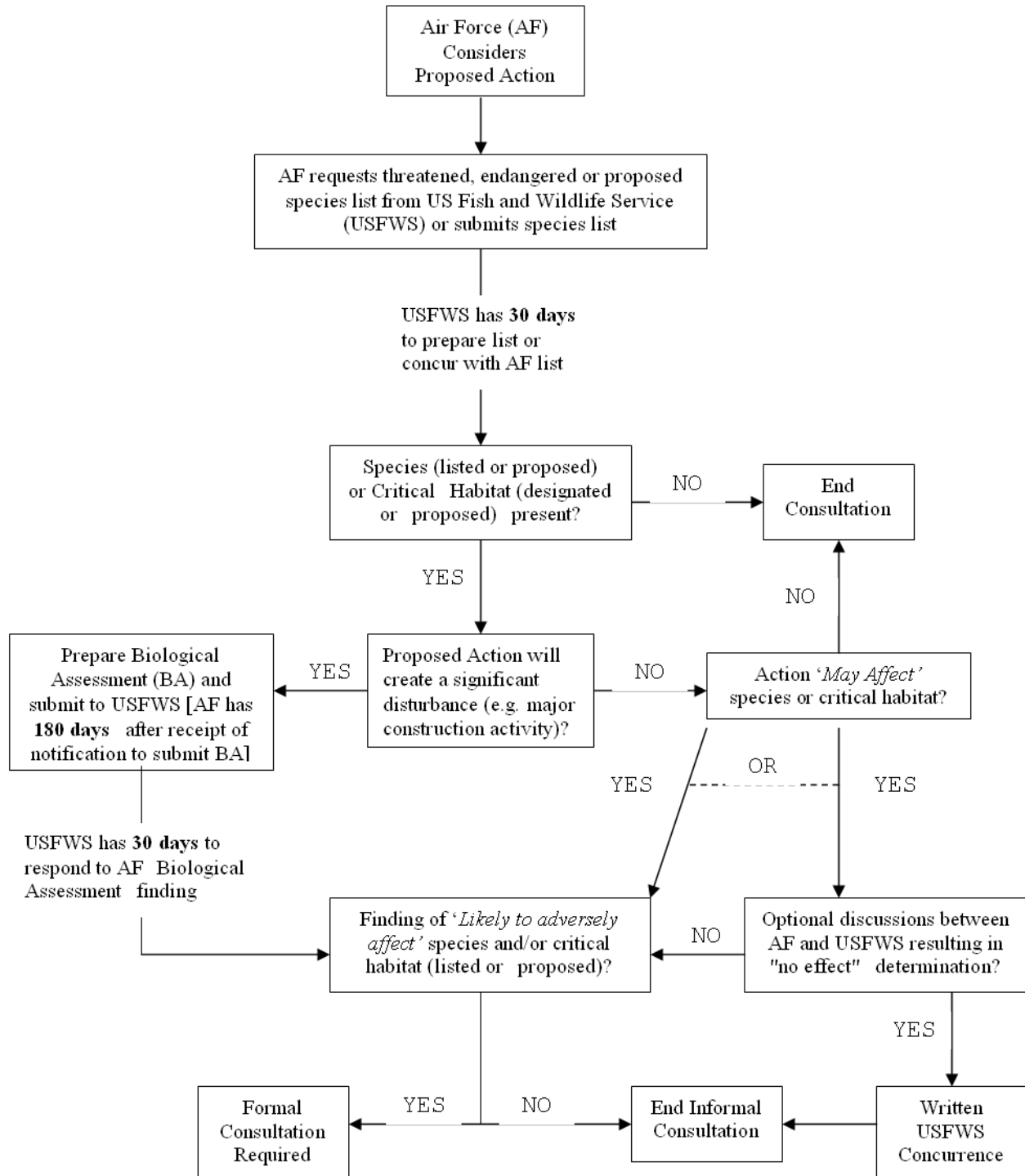


Figure A4.2. Formal Consultation Process [50 CFR 402.14].

